

**A Cultural Resource Inventory of High- and Medium- Site
Sensitivity Areas, Fort Carson Military Reservation: El Paso,
Fremont, and Pueblo Counties, Colorado, 1998**

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Cooperative Agreement No. 6115-4-8024

**Research administered by the National Park Service
Midwest Archeological Center, Lincoln, NE**

**Report prepared for and funded by
The Directorate of Environmental Compliance and Management
Fort Carson, Colorado**

**Fort Carson
Cultural Resources Management Series
Contribution 3**

2000

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

20010516 068

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)

2. REPORT DATE
September 2000

3. REPORT TYPE AND DATES COVERED
Final

4. TITLE AND SUBTITLE

A Cultural Resource Inventory of High- and Medium-Site Sensitivity Areas, Fort Carson....

5. FUNDING NUMBERS

6115-4-8024

6. AUTHOR(S)

Mona Charles, Philip Duke, Randy Nathan, Sujan Bryan and Christine Markussen

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Fort Lewis College
1000 Rim Drive,
Durango, Co 81301

8. PERFORMING ORGANIZATION
REPORT NUMBER

N/A

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Midwest Archeological Center, NPS
100 Centennial Mall N, Room 474,
Lincoln, NE 68508-3873

10. SPONSORING / MONITORING
AGENCY REPORT NUMBER
Fort Carson Cultural
Resources Management
Series Contribution
Number 3

11. SUPPLEMENTARY NOTES

Prepared for and funded by the Directorate of Environmental Compliance and Management, Fort Carson, Colorado.

12a. DISTRIBUTION / AVAILABILITY STATEMENT

Available

12b. DISTRIBUTION CODE

N/A

13. ABSTRACT (Maximum 200 words)

A cultural resources inventory of the Fort Carson Military Reservation was undertaken by Fort Lewis College, Durango, Colorado, in the summer and fall of 1998. The areas inventoried include portions of three counties: El Paso, Fremont, and Pueblo. Four thousand and thirty-six acres of high-site sensitivity areas and 3,200 acres of medium-site sensitivity areas were inventoried, totaling 7,236 acres. A total of 89 cultural resources were recorded, and 2 previously recorded sites were revisited and reevaluated, bringing the total number of sites to 91. Additionally, 86 isolated finds were recorded. The distribution of recorded sites is as follows: 74 (81%) prehistoric sites, 15 (17%) historic sites, and 2 (2%) multicomponent historic and prehistoric sites. Sixty-eight (75%) of the sites are recommended as not eligible for nomination to the National Register of Historic Places, while the remaining twenty-three (25%) sites are recommended as eligible for nomination to the National Register of Historic Places. Future management of those sites evaluated as significant include the following standard recommendations: avoid, protect (i.e., fence), test excavate, or data recovery.

14. SUBJECT TERMS

Archeology, History, Fort Carson, Colorado

15. NUMBER OF PAGES

365

16. PRICE CODE

17. SECURITY CLASSIFICATION
OF REPORT

Unclassified

18. SECURITY CLASSIFICATION
OF THIS PAGE

Unclassified

19. SECURITY CLASSIFICATION
OF ABSTRACT

Unclassified

20. LIMITATION OF ABSTRACT

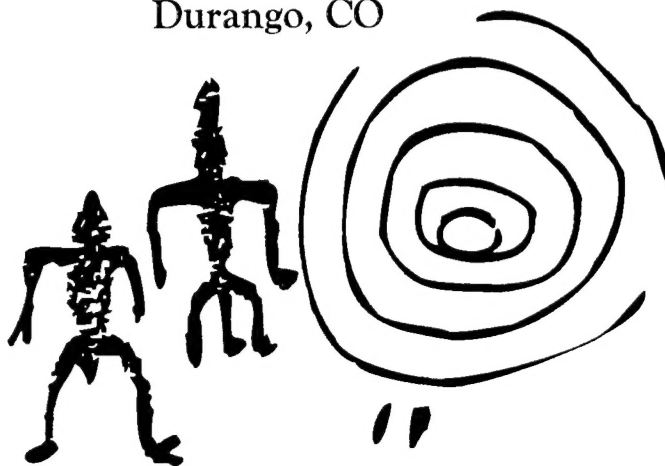
None

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Cultural Resource Management Series
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Report prepared for and funded by
The Directorate of Environmental Compliance
and Management Fort Carson, CO

2000

Preface

The archeological investigations reported in this manuscript are an important part of the Fort Carson Cultural Resources Management Program. The goal of the program is to maintain the largest possible area for military training while protecting significant cultural and environmental resources. Through an Interagency Service Agreement, the National Park Service, Midwest Archeological Center (MWAC), assists Fort Carson in accomplishing its cultural resources goals and meeting its legal obligations. Fort Lewis College completed the reported project under a cooperative agreement with the MWAC.

The current study is part of an integrated plan that takes a long-term systematic approach to meeting identification, evaluation, and resource protection requirements mandated by the National Historic Preservation Act. Beginning in 1978, Fort Carson initiated development of a model of site locations which along with knowledge of military land use patterns would guide efficient and cost-effective inventory of training lands. The project reported here completes the first phase of the inventory program – completion of those areas where archeological resources were most likely to be present and in which training impacts could be expected. In addition, the results of this project are a valuable contribution to our knowledge of the prehistory and resources of central Colorado.

The first federally funded survey on Fort Carson began in 1978. Since then Fort Carson has used a multidisciplinary approach combining archeological theory and historical methods with geological, geomorphological, botanical and statistical techniques and procedures in order to focus its efforts to locate, evaluate, and protect significant cultural resources. Professional studies and consultations with Native American tribes have resulted in the identification of National Register of Historic Places eligible sites and districts. All major prehistoric and historic cultural periods recognized on the Great Plains and Rocky Mountains are represented by the cultural resources on Fort Carson and the Pinon Canyon Maneuver Site. Sites of the Paleoindian, Archaic, and Ceramic stages are present as are sites from the Fur Trade era, 19th century Hispanic and Euroamerican settlements, early 20th century homesteading and ranching, and World War II and Cold War era military sites.

The Cultural Resources Management Program is in the Directorate of Environmental Compliance and Management. The directorate is tasked with maintaining Fort Carson's compliance with federal, state, and local environmental laws and mandates. Because decisions affecting one resource will impact other resources, the decisions we make today will affect the condition of Department of Army lands and resources for future training, research, and recreation. Mission requirements, training resources, wildlife, range, soil, hydrology, air, and recreation influence cultural resources management decisions. Integrating compliance and resource protection concerns into a comprehensive planning process reduces the time and effort expended on the compliance process, minimizes conflicts between resource protection and use, allows flexibility in project design, minimizes costs, and maximizes resource protection.

Federal laws protect the resources on Fort Carson and the Pinon Canyon Maneuver Site. Theft and vandalism are federal crimes. Protective measures ensure that Army activity does not inadvertently impact significant cultural sites. Fort Carson does not give out site location information nor are sites developed for public visitation. Similar resources are located in the Picketwire Canyonlands where public visits can be arranged through the U.S. Forest Service, Comanche National Grasslands in La Junta, Colorado.

Fort Carson endeavors to make results of the resource investigations available to the public and scientific communities. Technical reports on cultural resources are on file at the Fort Carson Curation Facility (Building 2420) and the Colorado State Historic Preservation Office and are available through the National Technical Information Service, Springfield VA. Selected reports have been distributed to public libraries in Colorado. Three video programs produced by Fort Carson are periodically shown on Public Broadcasting Stations. Non-technical reports on the prehistory, history and rock art of southeastern Colorado have been distributed to schools and libraries within the state

Fort Carson continues to demonstrate that military training and resource protection are mutually compatible goals.

Stephen A. Chomko
Cultural Resources Manager
Directorate of Environmental Compliance and Management
Fort Carson, Colorado
October 2000

Popular Abstract

Archeological investigations indicate that Fort Carson Military Reservation, located just outside the city of Colorado Springs, Colorado, has been inhabited since approximately 10,000 years ago. During the prehistoric period, which lasted until about 250 years ago, aboriginal inhabitants lived off the wild game and plants of the region, seasonally visiting the adjacent plains and mountains in wide-ranging seasonal movements. The arrival of the Europeans drastically changed aboriginal lifestyles, and during the 19th century Native Americans here and throughout the continent were forced to move onto reservations and abandon much of their traditional culture. Euroamerican settlers used the newly opened lands for farming, ranching, and other activities. The remains of all these people are still found on the military reservation. In 1942, the US Army acquired land for what is now the Fort Carson Military Reservation, which now serves as an army headquarters and training ground. In fulfillment of various federal laws and directives, army installations are required to conduct archeological and historic inventories of their lands. Accordingly, in 1998 Fort Lewis College surveyed a total of 7,236 acres of land in the reservation boundaries. A total of 89 prehistoric or historic sites were located and recorded, 2 sites were revisited and reevaluated, and 86 isolated finds were recorded. Twenty-three of these sites are considered eligible for nomination to the National Register of Historic Places. These sites are of various types and size, and date from approximately 3000 B.C. to the historic period.

Technical Abstract

A cultural resources inventory of the Fort Carson Military Reservation was undertaken by Fort Lewis College, Durango, Colorado, in the summer and fall of 1998. The inventory was divided between areas of probable high-site sensitivity and those of medium-site sensitivity, identified as such in the Historic Preservation Plan for Fort Carson. The areas inventoried include portions of three counties: El Paso, Fremont, and Pueblo. They are located on six United States Geologic Survey 7.5' quadrangle maps: Cheyenne Mountain, Fountain, Mount Pittsburg, Pierce Gulch, Timber Mountain, and Stone City, all in Colorado. Four thousand and thirty-six acres of high-site sensitivity areas and 3,200 acres of medium-site sensitivity areas were inventoried, totaling 7,236 acres. A total of 89 cultural resources were recorded, and 2 previously recorded sites were revisited and reevaluated, bringing the total number of sites to 91. Additionally, 86 isolated finds were recorded. The distribution of recorded sites is as follows: 74 (81%) prehistoric sites, 15 (17%) historic sites, and 2 (2%) multicomponent historic and prehistoric sites. Sixty-eight (75%) of the sites are recommended as not eligible for nomination to the National Register of Historic Places, while the remaining twenty-three (25%) sites are recommended as eligible for nomination to the National Register of Historic Places. Future management of those sites evaluated as significant include the following standard recommendations: avoid, protect (i.e., fence), test excavate, or data recovery. In cases where the significance of a site is not readily evident from the surface, it is suggested that the site receive limited subsurface investigations, the results of which will allow for more informed decisions regarding site management. Cultural resources recommended as not significant would receive no further archeological work.

Acknowledgments

We sincerely thank our field crew of the 1998 project. Student archeologists included Cody Anderson, Heather Brown, Fred Cosgrove, John Hall, Kai Heideman, Carol Korsgren, Christine Markussen, Micah McClung, Bernard (Beau) Schriever, and Benjamin (Strider) Willman. Sujan Bryan, a recent graduate of Fort Lewis College, served as a crew member. Ron Marvin, from the Midwest Archeological Center, was responsible for the operation and maintenance of the Precision Lightweight GPS Receiver supplied by the Midwest Archeological Center. Ron also aided Randy Nathan, the Field Director, and Randy Korgel, Crew Chief, with the extra responsibilities of their positions. The high-quality artifact illustrations are the work of Ewa Krakowska. Beau's expertise in the use of the Global Positioning System and the associated software was instrumental in completing the project. Christine Markussen was invaluable to the completion of the project. Her enthusiasm as she completed the myriad tasks asked of her was greatly appreciated by the staff.

We owe a special debt of gratitude to Melissa Connor and Galen Burgett, Midwest Archeological Center, for their assistance in helping us organize the project and for acting as such good liaisons with Army personnel. We thank the following personnel in Range Control, Ms. Lanell Thuesen, Mr. Barry, and Mr. Cluck, for keeping us out of harm's way. Vince Schiavitti, Office of Directorate of Environmental Compliance and Management, provided us with the necessary technical advice to complete the assigned tasks in a timely and efficient manner. Randy Korgel had many roles in this project, not the least of which was Crew Chief. Randy's good attitude motivated the crew and staff alike, and he was an excellent communicator between Fort Lewis College and the Army, especially Range Control. Finally, we thank Steve Chomko, of the Office of Directorate of Environmental Compliance and Management, for his commitment to integrating educational needs and values into the management of archeological resources of the Fort Carson Military Reservation. We especially thank Randy and Steve for coordinating a training session on the identification of, and safety procedures involved with, unexploded ordnance.

Table of Contents

Preface	i	
Popular Abstract	iii	
Technical Abstract	iii	
Acknowledgments	iv	
List of Figures	vii	
List of Tables	x	
Chapter 1		
Introduction	1.1	
Chapter 2		
Physical and Cultural Setting	2.1	
The Natural Environment	2.1	
The Cultural Environment	2.7	
CHAPTER 3		
Review of Previous Archeological Work in the Fort Carson Military Reservation	3.1	
CHAPTER 4		
Research Design and Objectives	4.1	
Expected Results	4.2	
CHAPTER 5 Field and Laboratory Methods		5.1
Introduction	5.1	
Field Methods and Techniques	5.1	
Recording	5.2	
Artifact Analysis	5.4	
Laboratory Methods and Techniques	5.5	
CHAPTER 6		
Inventory Results	6.1	
Introduction	6.1	
Results	6.1	
CHAPTER 7		
Material Culture	7.1	
Introduction	7.1	
Flaked-stone Tools	7.1	
Miscellaneous Non-flaked Stone Tools	7.16	
Debitage	7.18	
Historic Artifacts	7.21	

CHAPTER 8	
Management Recommendations	8.1
Introduction8.1
CHAPTER 9	
Summary and Concluding Statements	9.1
REFERENCES CITED	10.1
Appendix I	
State of Colorado Site Forms (Removed from public distribution)	
Appendix II	
Xerox Copies of U.S.G.S. 7.5' Quadrangle Maps	
(Removed from public distribution)	
Appendix III	
Site Descriptions	
Appendix IV	
Radiocarbon Dates	

List of Figures

Figure 1.1. Location Map for Fort Carson Military Reservation, South-central Colorado	1.2
Figure 1.2. High- and Medium-site Sensitivity Areas Surveyed by Fort Lewis College, 1998 Archeological Inventory, FCMR	1.3
Figure 6.1. Site Types Recorded by Fort Lewis College, Archeological Inventory, FCMR	6.13
Figure 6.2. High- and Medium-site Sensitivity Areas by SiteTypes Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.14
Figure 6.3. Chronological Data for Sites Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.26
Figure 7.1. Patterned Flaked Tools Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.5
Figure 7.2. Projectile Points, El Paso and Fremont Counties Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.7
Figure 7.3. Projectile Points, 5FN1592 Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.10
Figure 7.4. Projectile Points, Fremont and Pueblo Counties Collected by Fort Lewis College, 1998Archeological Inventory, FCMR	7.12
Figure 7.5. Maul, 5PE3007.1a, Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.19
Figure 7.6. Material Types of Lithic Artifacts Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.	7.22
Figure 7.7. Trading Token, 5FN1593, Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.23
III.1. Site Map, 5EP2904	III.2
III.2. Site Map, 5EP2905	III.4
III.3. Site Map, 5EP2906	III.7
III.4. Site Map, 5EP2907	III.9
III.5. Site Map, 5EP2908	III.12
III.6. Site Map, 5EP2909	III.14
III.7. Site Map, 5EP2910	III.16
III.8. Site Map, 5EP2911	III.18
III.9. Feature 2, 5EP2911	III.19
III.10. Site Map, 5EP2912	III.21
III.11. Site Map, 5EP2913	III.23
III.12. Site Map, 5EP2914	III.26
III.13. Site Map, 5EP2915	III.28
III.14. Site Map, 5EP2916	III.32
III.15. Site Map, 5EP2917	III.35
III.16. Site Map, 5EP2918	III.39
III.17. Site Map, 5EP2919	III.41
III.18. Site Map, 5EP2920	III.44
III.19. Site Map, 5EP2921	III.47
III.20. Feature 1 and Feature 2, 5EP2921	III.49
III.21. Site Map, 5EP2922	III.50
III.22. Site Map, 5EP2923	III.53
III.23. Site Map, 5EP2924	III.55
III.24. Site Map, 5EP2925	III.59
III.25. Site Map, 5EP2926	III.62
III.26. Site Map, 5FN1578	III.64
III.27. Site Map, 5FN1579	III.68
III.28. Site Map, 5FN1580	III.70
III.29. Site Map, 5FN1581	III.72
III.30. Site Map, 5FN1582	III.75
III.31. Site Map, 5FN1583	III.76
III.32. Site Map, 5FN1584	III.79
III.33. Site Map, 5FN1585	III.81

III.34. Site Map, 5FN1586	III.84
III.35. Site Map, 5FN1587	III.86
III.36. Photo of Historic Road, 5FN1587	III.87
III.37. Site Map, 5FN1588	III.88
III.38. Site Map, 5FN1589	III.92
III.39. Site Map, 5FN1590	III.95
III.40. Photo of Historic Fence, 5FN1590	III.94
III.41. Site Map, 5FN1591	III.97
III.42. Site Map, 5FN1592	III.99
III.43. Detail Map of Shelters, 5FN1592	III.100
III.44. Rock Art, Panel 1 and Panel 4, 5FN1592	III.101
III.45. Site Map, 5FN1593	III.105
III.46. Site Map, 5FN1594	III.107
III.47. Site Map, 5FN1595	III.109
III.48. Site Map, 5FN1596	III.113
III.49. Site Map, 5FN1597	III.116
III.50. Site Map, 5FN1601	III.118
III.51. Site Map, 5PE2940	III.121
III.52. Site Map, 5PE2941	III.124
III.53. Inset Site Map, 5PE2941	III.125
III.54. Profile, 5PE2941	III.126
III.55. Site Map, 5PE2942	III.127
III.56. Site Map, 5PE2943	III.129
III.57. Site Map, 5PE2944	III.130
III.58. Site Map, 5PE2945	III.133
III.59. Site Map, 5PE2946	III.135
III.60. Site Map, 5PE2947	III.138
III.61. Site Map, 5PE2948	III.140
III.62. Site Map, 5PE2949	III.142
III.63. Site Map, 5PE2950	III.145
III.64. Site Map, 5PE2951	III.147
III.65. Site Map, 5PE2952	III.149
III.66. Site Map, 5PE2953	III.151
III.67. Site Map, 5PE2954	III.154
III.68. Site Map, 5PE2955	III.156
III.69. Site Map, Prehistoric Component, 5PE2956	III.159
III.70. Site Map, Historic Component, 5PE2956	III.160
III.71. Site Map, 5PE2957	III.164
III.72. Site Map, 5PE2958	III.166
III.73. Site Map, 5PE2959	III.169
III.74. Site Map, 5PE2960	III.171
III.75. Site Map, 5PE2961	III.173
III.76. Cross-section Map, 5PE2961	III.174
III.77. Rock Art Panel, 5PE2961	III.175
III.78. Site Map, 5PE2962	III.177
III.79. Site Map, 5PE2963	III.179
III.80. Cross-section Map, 5PE2963	III.180
III.81. Site Map, 5PE2964	III.182
III.82. Feature 1, 5PE2964	III.183
III.83. Site Map, 5PE2965	III.186
III.84. Site Map, 5PE2966	III.188
III.85. Site Map, 5PE2967	III.191

III.86. Cross-section Map, 5PE2967	III.192
III.87. Site Map, 5PE2968	III.194
III.88. Site Map, 5PE2969	III.196
III.89. Site Map, 5PE2970	III.198
III.90. Site Map, 5PE2971	III.200
III.91. Site Map, 5PE2972	III.203
III.92. Site Map, 5PE2973	III.205
III.93. Site Map, 5PE2974	III.208
III.94. Site Map, 5PE2975	III.210
III.95. Site Map, 5PE2977	III.213
III.96. Site Map, 5PE2978	III.215
III.97. Site Map, 5PE2979	III.217
III.98. Site Map, 5PE2980	III.219
III.99. Site Map, 5PE2981	III.223
III.100. Site Map, 5PE2982	III.224
III.101. Site Map, 5PE2983	III.226
III.102. Photo, Historic Fence, 5PE2983	III.225
III.103. Site Map, 5PE2984	III.228
III.104. Cross-section Map, 5PE2984	III.229
III.105. Site Map, 5PE2985	III.231
III.106. Site Map, 5PE344	III.234
III.107. Site Map, 5PE625	III.236

List of Tables

Table 1.1. Total Acres Inventoried by Fort Lewis College, 1998 Archeological Inventory, FCMR	1.4
Table 2.1. Generalized Bedrock Lithology, Fort Carson Military Reservation	2.2
Table 6.1. Archeological Resources Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.2
Table 6.2. Isolated Finds Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.7
Table 6.3. Site Density for Sites Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.11
Table 6.4. Cultural Resources Eligibility Recommendations by County, 1998 Archeological Inventory, FCMR	6.11
Table 6.5. Site Types by Sensitivity Areas Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR ..	6.12
Table 6.6. Site Data Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.16
Table 6.7. Chi-square Results for Mean Distance to Water for Sites Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.15
Table 6.8. Site Data for Prehistoric Open Sites Lacking Features Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.21
Table 6.9. Site Data for Prehistoric Sheltered Sites Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.23
Table 6.10. Historical Site Data Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	6.25
Table 7.1. Complete Bifaces Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.2
Table 7.2. Broken Bifaces Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.3
Table 7.3. Projectile Points Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.6
Table 7.4. Scrapers Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.15
Table 7.5. Unpatterned Flaked-lithic Tools Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR ...	7.17
Table 7.6. Chi-square Results for Flaked-lithic Debitage Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR	7.20
Table 8.1. Management Recommendations for the Sited Recommended as Eligible for Nomination to the NRHP, 1998 Archaeological Inventory, FCMR	8.2
III.1. Flaked-lithic Debitage, 5EP2904	III.3
III.2. Flaked-lithic Debitage, 5EP2905	III.5
III.3. Flaked-lithic Debitage, 5EP2906	III.8
III.4. Flaked-lithic Debitage, 5EP2907	III.10
III.5. Flaked-lithic Debitage, 5EP2908	III.13
III.6. Flaked-lithic Debitage, 5EP2909	III.15
III.7. Flaked-lithic Debitage, 5EP2912	III.22
III.8. Flaked-lithic Debitage, 5EP2913	III.24
III.9. Flaked-lithic Debitage, 5EP2914	III.27
III.10. Flaked-lithic Debitage, 5EP2915	III.30
III.11. Flaked-lithic Debitage by Size Grade, 5EP2915	III.31
III.12. Flaked-lithic Debitage, 5EP2916	III.34
III.13. Flaked-lithic Debitage, 5EP2917	III.36
III.14. Flaked-lithic Debitage by Size Grade, 5EP2917	III.37
III.15. Flaked-lithic Debitage, 5EP2918	III.40
III.16. Flaked-lithic Debitage, 5EP2919	III.42
III.17. Flaked-lithic Debitage, 5EP2920	III.45
III.18. Flaked-lithic Debitage by Size Grade, 5EP2920	III.46
III.19. Flaked-lithic Debitage, 5EP2922	III.52
III.20. Flaked-lithic Debitage, 5EP2923	III.54
III.21. Flaked-lithic Debitage, 5EP2924	III.57
III.22. Flaked-lithic Debitage by Size Grade, 5EP2924	III.58
III.23. Flaked-lithic Debitage, 5EP2925	III.60
III.24. Flaked-lithic Debitage, 5EP2926	III.63
III.25. Flaked-lithic Debitage, 5FN1578	III.66
III.26. Flaked-lithic Debitage by Size Grade, 5FN1578	III.67

III.27. Flaked-lithic Debitage, 5FN1580	III.71
III.28. Flaked-lithic Debitage, 5FN1581	III.73
III.29. Flaked-lithic Debitage, 5FN1583	III.77
III.30. Flaked-lithic Debitage, 5FN1584	III.80
III.31. Flaked-lithic Debitage, 5FN1585	III.82
III.32. Flaked-lithic Debitage, 5FN1586	III.85
III.33. Flaked-lithic Debitage, 5FN1588	III.89
III.34. Flaked-lithic Debitage by Size Grade, 5FN1588	III.90
III.35. Flaked-lithic Debitage, 5FN1589	III.93
III.36. Flaked-lithic Debitage, 5FN1591	III.98
III.37. Flaked-lithic Debitage, 5FN1592	III.102
III.38. Flaked-lithic Debitage by Size Grade, 5FN1592	III.104
III.39. Flaked-lithic Debitage, 5FN1595	III.111
III.40. Flaked-lithic Debitage by Size Grade, 5FN1595	III.112
III.41. Flaked-lithic Debitage, 5FN1596	III.114
III.42. Flaked-lithic Debitage, 5FN1597	III.117
III.43. Flaked-lithic Debitage, 5FN1601	III.119
III.44. Flaked-lithic Debitage, 5PE2940	III.122
III.45. Flaked-lithic Debitage, 5PE2944	III.132
III.46. Flaked-lithic Debitage, 5PE2945	III.134
III.47. Flaked-lithic Debitage, 5PE2946	III.137
III.48. Flaked-lithic Debitage, 5PE2947	III.139
III.49. Flaked-lithic Debitage, 5PE2949	III.143
III.50. Flaked-lithic Debitage, 5PE2950	III.146
III.51. Flaked-lithic Debitage, 5PE2952	III.150
III.52. Flaked-lithic Debitage, 5PE2953	III.152
III.53. Flaked-lithic Debitage, 5PE2954	III.155
III.54. Flaked-lithic Debitage, 5PE2955	III.157
III.55. Flaked-lithic Debitage, 5PE2956	III.161
III.56. Flaked-lithic Debitage by Size Grade, 5PE2956	III.162
III.57. Flaked-lithic Debitage, 5PE2957	III.165
III.58. Flaked-lithic Debitage, 5PE2958	III.168
III.59. Flaked-lithic Debitage, 5PE2960	III.172
III.60. Flaked-lithic Debitage, 5PE2962	III.178
III.61. Flaked-lithic Debitage, 5PE2964	III.184
III.62. Flaked-lithic Debitage, 5PE2965	III.187
III.63. Flaked-lithic Debitage, 5PE2966	III.189
III.64. Flaked-lithic Debitage, 5PE2968	III.195
III.65. Flaked-lithic Debitage, 5PE2970	III.199
III.66. Flaked-lithic Debitage, 5PE2971	III.201
III.67. Flaked-lithic Debitage, 5PE2972	III.204
III.68. Flaked-lithic Debitage, 5PE2973	III.206
III.69. Flaked-lithic Debitage, 5PE2974	III.209
III.70. Flaked-lithic Debitage, 5PE2975	III.211
III.71. Flaked-lithic Debitage, 5PE2977	III.214
III.72. Flaked-lithic Debitage, 5PE2979	III.218
III.73. Flaked-lithic Debitage, 5PE2980	III.220
III.74. Flaked-lithic Debitage by Size Grade, 5PE2980	III.221
III.75. Flaked-lithic Debitage, 5PE2984	III.230
III.76. Flaked-lithic Debitage, 5PE2985	III.233
III.77. Flaked-lithic Debitage, 5PE625	III.237
III.78. Flaked-lithic Debitage by Size Grade, 5PE625	III.238

Chapter 1

Introduction

Under a continuing cooperative agreement between Fort Lewis College (FLC) and the Midwest Archeological Center (MWAC), Fort Lewis College conducted a Class III cultural resource inventory of high- and medium-site sensitivity areas within the Fort Carson Military Reservation (FCMR), south-central Colorado, during the summer and fall of 1998. A total of 7,236 acres was inventoried over five field sessions. Field work began on July 14 and was completed on October 18, 1998. The inventory resulted in the identification and recording of 89 new archeological sites, the reevaluation of 2 previously recorded sites, and the location and documentation of 86 isolated finds. Of the total 91 sites, 74 are prehistoric, 15 are historic, and 2 are multi-component historic and prehistoric. Twenty-three of these sites are recommended as eligible for nomination to the National Register of Historic Places (NRHP), while the remaining sixty-eight are recommended as not eligible for nomination to the NRHP.

This inventory was conducted by staff and students from FLC. Additionally, Ron Marvin from MWAC was present throughout the length of the project. Prefield work at Fort Carson Curation Facility was conducted by Mona Charles, the Project Director, and Sujan Bryan, the Office Manager, from July 11 through July 14, 1998. Philip Duke, the Principal Investigator, was present at the beginning of the field season as well. The crew arrived on July 14, July 15 was allocated to orientation and prefield training, and field work began on July 16. The Field Director was Randy Nathan of FLC. Randy Korgel served as Crew Chief. The Project Director was present in the field throughout the majority of the project.

The first two sessions proceeded on schedule with only minor weather delays. The third session, however, was shortened due to the closure by the military of our survey areas. To ensure the scheduled number of field days, we extended the fourth session. The fifth session, scheduled for mid-September, was postponed by military closure of one of the three remaining inventory areas, and ultimately this session ran from October 9 through October 18.

The FCMR is in south-central Colorado (Figure 1.1), encompasses 215 square miles (137,400 acres), and is within El Paso, Pueblo, and Fremont counties. The FCMR was established in 1942 and is currently home to the 3rd Armored Cavalry Regiment, the 10th Special Forces Group, the 43rd Area Support Group, and the 3rd Brigade Combat. Under U.S. Army Regulation AR200-4, the installation is required to identify National Register-eligible properties and to allow consideration of potential impacts of federal actions on such properties. Because of the nature of current land use (e.g., mechanized maneuvers, infantry training, artillery training, flight training), there is the potential for damage to the cultural resources on the reservation.

The purpose of the project was to identify, record, and make eligibility recommendations on cultural properties within selected high- and medium-site sensitivity areas of the FCMR (Figure 1.2). The 7,236 acres that were inventoried during this project comprised portions or all of 42 predetermined areas (Table 1.1) over the entire base, but are concentrated in the southwest and south-central parts of the base. Of the total acreage, 4,035.66 are designated as areas of high-site sensitivity and 3,200.37 are in areas of medium-site sensitivity. A site sensitivity model was developed for Fort Carson Military Reservation by Centennial Archaeology and is reported in the Historic Preservation Plan (HPP), also a product of Centennial Archaeology (Zier et al. 1997).

The purpose of this report is to present the findings of the 1998 cultural resource inventory and to provide recommendations for the management of each resource recorded during the inventory. The report includes nine chapters and four appendices. Chapter 2 offers a description of the natural and cultural settings of the FCMR, so that the findings of this survey can be placed into an appropriate management and research perspective. Chapter 3 reviews previous archeological work conducted on the military reservation, while Chapter 4 outlines the goals and research design for this project. Chapter 5 describes the specific field and laboratory methods used in this project. Chapter 6 summarizes the results of the inventory. Elementary statistical data are presented that reflect cultural patterns in the overall site inventory. Material culture information, which includes a discussion of all artifacts collected during the inventory, is the subject of

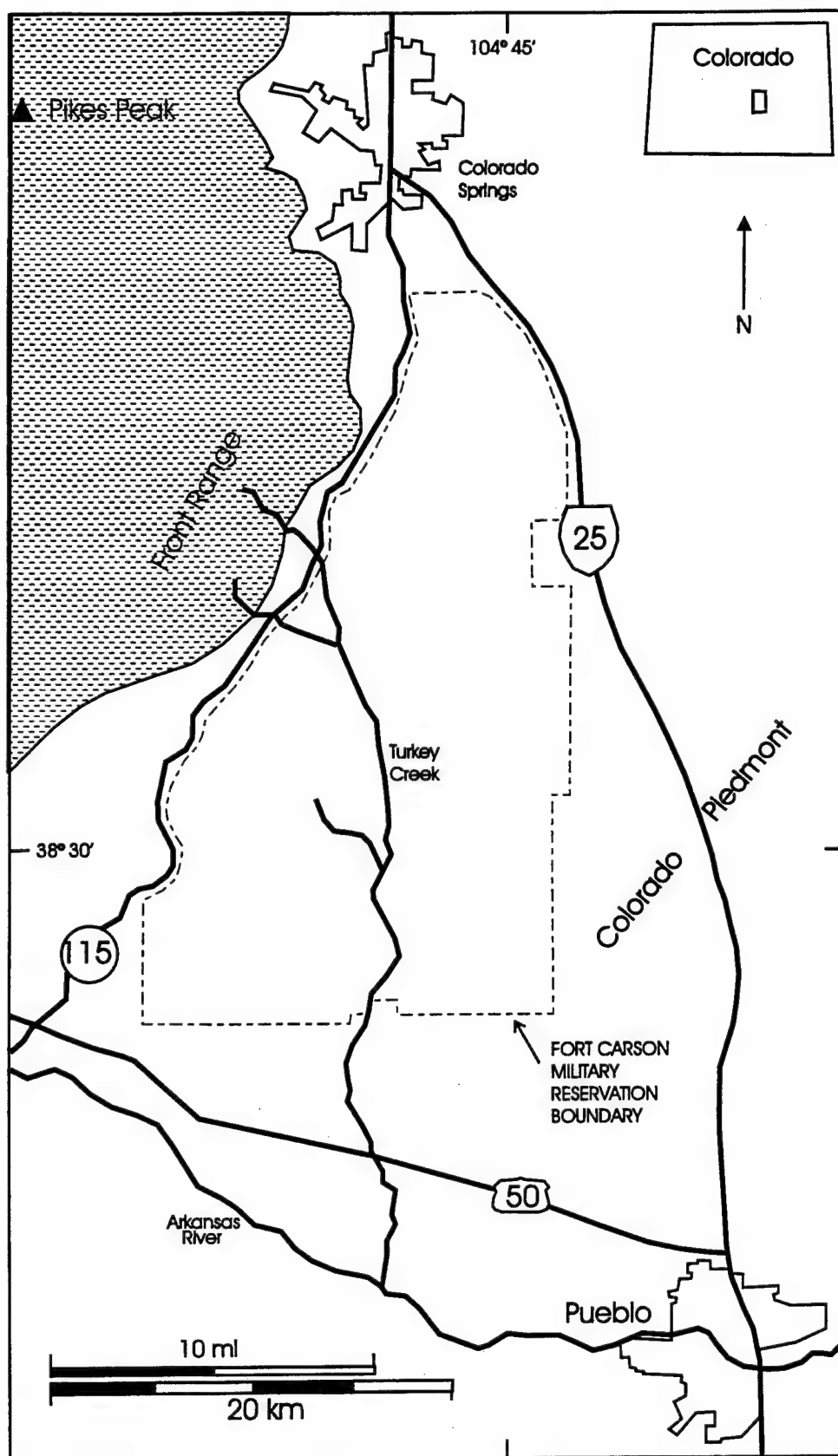


Figure 1.1. Location Map for Fort Carson Military Reservation, South-central Colorado Map adapted from Zier et al.(1996: Figure 1).

Fort Carson Military Reservation

Site Sensitivity

 Medium (areas designated by an italicized number)

 High (areas designated by an underlined number)

scale = 1 : 50,000

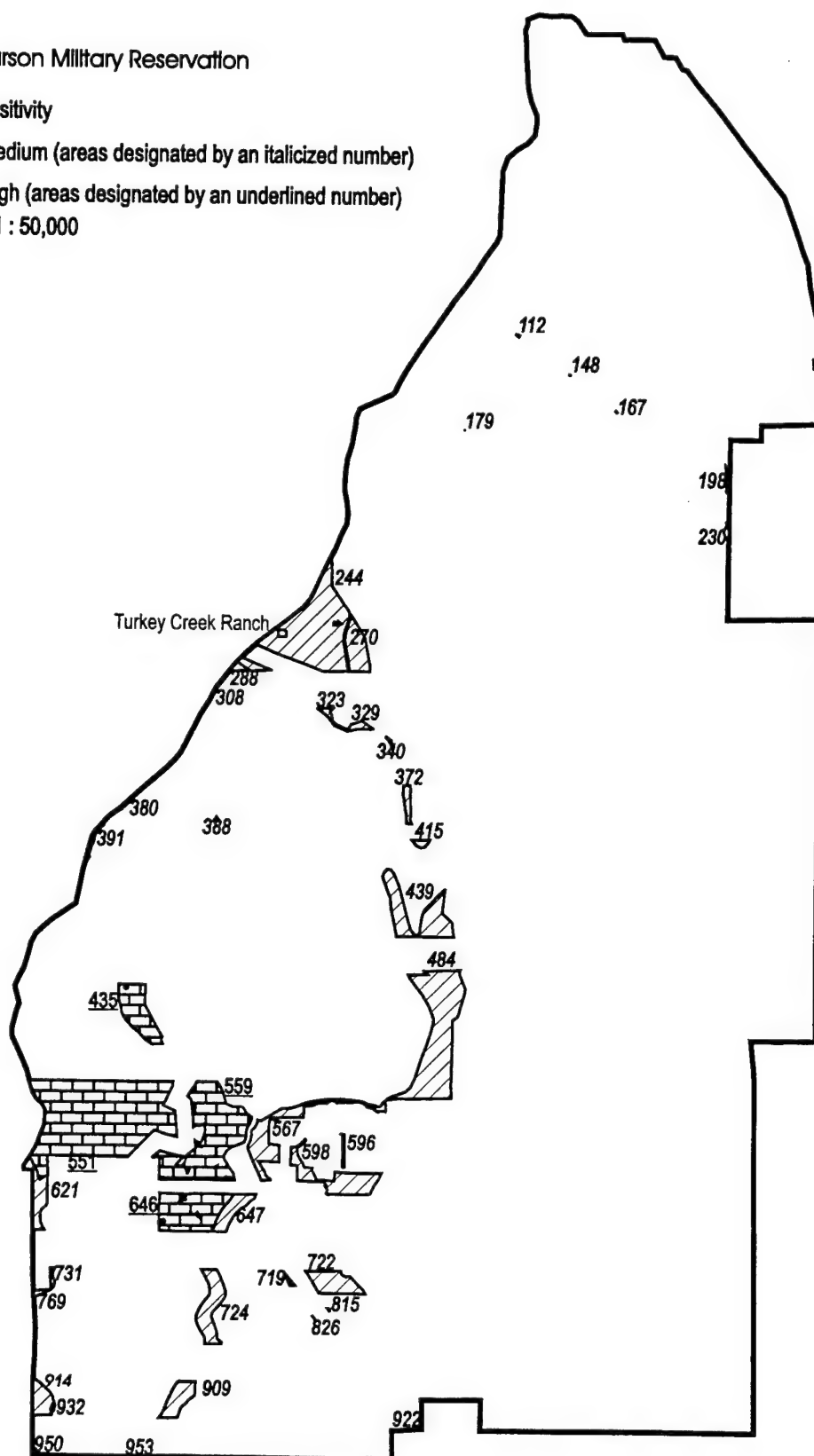


Figure 1.2. High- and Medium-site Sensitivity Areas Surveyed by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Table 1.1. Total Acres Inventoried by Fort Lewis College, 1998 Archeological Inventory.

Area	Sensitivity Status	Acreage	Quadrangle	Area	Sensitivity Status	Acreage	Quadrangle
112	High	0.81	Cheyenne Mountain	559	Medium	844.90	Pierce Gulch
148	High	1.00	Cheyenne Mountain	567	High	299.24	Timber Mountain
167	High	0.20	Cheyenne Mountain	582	High	170.63	Pierce Gulch
179	High	0.02	Cheyenne Mountain	596	High	9.43	Stone City
198	High	3.42	Fountain	598	High	251.01	Stone City
230	High	10.40	Fountain	621	High	126.62	Pierce Gulch
244	High	988.00	Timber Mountain	646	Medium	406.38	Pierce Gulch
270	High	174.52	Timber Mountain	647	High	119.70	Pierce Gulch
288	Medium	17.25	Mount Pittsburg	719	High	6.04	Pierce Gulch
308	High	2.87	Mount Pittsburg	722	High	168.47	Stone City
323	High	14.32	Timber Mountain	724	High	209.37	Pierce Gulch
329	High	28.57	Timber Mountain	731	High	22.45	Pierce Gulch
340	High	2.51	Timber Mountain	769	High	0.25	Pierce Gulch
372	High	37.18	Timber Mountain	815	High	0.45	Stone City
380	High	2.96	Mount Pittsburg	826	High	0.13	Stone City
388	High	1.16	Pierce Gulch	909	High	133.43	Pierce Gulch
391	High	13.28	Mount Pittsburg	914	High	100.95	Pierce Gulch
415	High	13.82	Timber Mountain	922	High	6.88	Stone City
435	Medium	200.00	Mount Pittsburg	932	High	0.01	Pierce Gulch
439	High	320.70	Timber Mountain	950	High	10.43	Stone City
484	High	781.19	Timber Mountain	953	High	3.24	Pierce Gulch
551	Medium	1,731.84	Mount Pittsburg/Pierce Gulch	Total Acreage = 7,236.03			

Chapter 7. Chapter 8 provides individual management recommendations for those sites recommended as eligible for nomination to the NRHP, while Chapter 9 provides a summary and concluding statements regarding the results of the inventory. The report concludes with references cited and four appendices. Appendix I is the set of Colorado State Cultural Resource Site and Isolated Find forms (these are removed from the published version). Appendix II, which is also removed from the published version, is a set of photocopies of the appropriate U.S.G.S. quadrangle maps with the location of sites and isolated finds. Individual site descriptions are the subject of Appendix III, which includes site maps and flaked-lithic debitage tables. Appendix IV, a copy of the radiocarbon dates from site 5PE2941, completes the report.

Chapter 2

Physical and Cultural Setting

THE NATURAL ENVIRONMENT

Physiography

The FCMR is at the zone of contact between the Plains and the Southern Rocky Mountain physiographic provinces (Fenneman 1931). It is located in the southern part of the Colorado Piedmont of the Great Plains and adjacent to the foothills of the Front Range. This location gives it great elevational range, from approximately 5,600 ft (1,707 m) above sea level (asl) at the reservation's eastern boundary, to 6,500 ft (1,981 m) asl at its western boundary. Five distinct physiographic areas occur in the FCMR: 1) the plains, 2) the low foothills, 3) the high foothill ridges, 4) the valley within the high foothill ridges, and 5) the high benches (Evanoff et al. 1996).

Geology and Geomorphology The geology and geomorphology of the FCMR are synthesized elsewhere (Charles et al. 1999a; 1999b; Evanoff et al. 1996; Jepson et al. 1992; Kuehn 1998; Madole 1989, 1990; Van Ness et al. 1990; Zier and Kalasz 1991), and the reader is referred to these individual reports for specific details on the local geology and geomorphology.

Bedrock Geology Geologic bedrock of the Fort Carson Military Reservation is mostly composed of sedimentary rocks ranging in age from Pennsylvanian through Cretaceous (Table 2.1).

The topography of the FCMR is largely the result of uplift, folding, and downwarping during the Late Cenozoic when block faulting and uplift were accompanied by volcanic activity over most of the Front Range. Sediments that had eroded from the rising Front Range were carried onto the Great Plains to the east and into intermontane basins to the west (Madole 1990:110). During the Miocene, accelerated uplift resulted in intensive canyon cutting in the mountains and erosion of the softer sediments (Ogallala Formation) from adjoining basins. The Colorado Piedmont, a physiographic entity, was shaped at this time. The Colorado Piedmont is topographically lower than the surrounding regions because the surface was stripped of the Miocene fluvial rocks that cover most of the adjoining Great Plains. In the FCMR, the sedimentary rocks were warped through folding, and they plunge to the southeast, where they merge with the Plains some 20-30 km from the Front Range.

Four anticlines (upwarps) separated by three synclines (downwarps) occur in the southwest half of the FCMR. These include three named folds: The RedCreek/Turkey Creek Anticline, the County Line Syncline, and the Wild Horse Anticline (Evanoff et al. 1996:8-9). All these folds were compressed in an east and west direction, which produced elongated features with north to north-northwest axial lines. Booth Mountain and Timber Mountain are the topographic expressions of the Red Creek/Turkey Creek Anticline, while Turkey Creek and Booth Gulch mark the position of the synclines.

Hydrology The major drainages in the Fort Carson Reservation are, from north to south, Rock Creek, Little Fountain Creek, Turkey Creek, Red Creek, and Beaver Creek. The streams in Fort Carson drain either to the east into Fountain Creek or to the Arkansas River to the south. An unnamed mesa, north of Table Mountain forms a portion of an upper drainage divide between the Turkey Creek drainage, which flows to the south, and the drainages that flow east into Fountain Creek. This unnamed mesa is the last topographic relief before the flat Plains to the east. Turkey Creek follows the trend of the Turkey Creek Syncline. The Turkey Creek valley was established during the Cenozoic when the ancestral Turkey Creek eroded the fluvial Tertiary rocks until its course was lowered onto the folded Mesozoic rocks. At this point, the stream course took the path of least resistance, eroding into the softer Upper Cretaceous shales and claystones. Eventually the channel was lowered onto resistant Dakota Sandstone. The superposition of the channel onto the eastward-

Table 2.1. Generalized Bedrock Lithology, Fort Carson Military Reservation.

System	Series	Formation	Member	Physical Description
Quaternary	Holocene	Alluvium		Gray, poorly sorted stony sand and silt forming floodplain
	Pleistocene	Landslide debris		Earth flows, debris flows on steep slopes (Holocene and Pleistocene)
		Eolian sands		Fine to coarse windblown sand (Holocene and Pinedale glaciation)
		Louviers alluvium		Thin gravelly deposits on terraces 70' (21m) above streams on plains
		Slocum Alluvium		Weathered gravel on cut surface 100' (30m) above modern streams (Sangamon Interglaciation or Illinois)
		Verdos Alluvium		Weathered gravel on cut surface 200-250' (60-75m) above modern streams (Yarmouth Interglaciation or Kansas Glaciation)
		Rocky Flats Alluvium		Weathered gravel on cut surface 350' (105m) above modern stream (Aftonian interglaciation or Nebraskan glaciation)
		Nussbaum Alluvium		Weathered gravel on pediment 450' (96-108m) above stream (Nebraskan glaciation)
Tertiary	Absent			
Cretaceous	Upper Cretaceous	Pierre Shale		Predominantly siltstone and claystone. Contains sandstone and sandy shale near top and bottom. Limestone masses forming conical buttes near middle, and fossiliferous concretions throughout. Thickness near 3900' (1170m)
		Niobrara	Smoky Hill Shale Member	Yellowish-gray, fossiliferous, calcareous shale and silty limestone
			Fort Hays Limestone Member	Beds of chalk 0.15 to 1 m thick separated by beds of dark-gray chalky shale 2.5-52 cm thick
		Carlisle Shale	Juana Lopez Member	Calcrete
			Codell Sandstone Member	Upper part is thin lenses of dark limestone interbedded with a limey shale. Basal 0.75 to 1 m is a dense, near-black, fossiliferous limestone
			Blue Hill Shale Member	Dark fissile shale with large calcareous concretions
			Fairport Chalk Member	Tan to black, chalky, calcareous shale
		Greenhorn Limestone	Bridge Creek Limestone Member	Interbedded, fossiliferous limestone and limey shale
			Hartland Shale Member	Light gray limey shale with thin beds of Bentonite
			Lincoln Limestone Member	Limey shale with platy limestone beds near base and top
		Graneros Shale		Dark gray to black, fissile, noncalcareous shale, with two beds of dense, dark limestone
	Lower Cretaceous	Dakota Sandstone		Yellowish brown, crossbedded cliff-forming sandstone
		Purgatoire Formation	Kiowa Shale Member	Fossiliferous, marine, dark-gray, claystone, siltstone and sandstone
			Cheyenne Sandstone Member	Massive white to yellowish brown, crossbedded sandstone
Jurassic	Upper Jurassic	Morrison Sandstone		Vanicolored claystone, brown weathering sandstone and gray sandstone
		Ralston Creek Formation		Greenish gray claystone, gray limestone with jasper and agate
Triassic		Lykins		Red siltstone, claystone, and sandstone about 180' (55m) thick
Permian		Lyons Sandstone		Red sandstone forming two resistant ledges 700 - 800' (210-240m) thick
Pennsylvanian		Fountain Formation		Red conglomerate and sandstone
			Glen Eyrie Shale Member	Sandstone, sandy shale, and black fossiliferous shale

dipping Dakota Sandstone resulted in the formation of Turkey Creek Canyon (Madole 1990:112). Steep sandstone cliffs on both sides of Turkey Creek Canyon provide suitable locations for prehistoric shelters and smooth cliff faces for rock art.

Holocene History The Holocene geological history of the FCMR has not been fully documented. However, generalized Holocene histories are available for the Turkey Creek drainage (Madole 1989, 1990) and for the Red Creek drainage (Kuehn 1998), and these are referred to for additional detail. Brief summaries from these works are presented below.

Madole (1989, 1990) hypothesized a Holocene history for the Turkey Creek drainage, that is based upon a paleoclimatic model of general atmospheric-circulation experiments and early Holocene paleoenvironmental data from other sites in the region. The alluvial stratigraphy of Turkey Creek was recorded by Madole (1989) for the purpose of providing a geoarcheological setting for the Recon John Shelter and is summarized in the following section.

The eastern edge of Booth Mountain is bounded by Turkey Creek, which is superimposed over the eastern axis of the Turkey Creek/Red Creek Syncline. Madole (1989) identifies three lithostratigraphic units in the Turkey Creek alluvium: a basal gravel unit (Unit 1), a sand unit that is comprised of two members (Unit 2), and a poorly sorted, gravelly alluvium (Unit 3).

Although the precise age of Lithostratigraphic Unit 1 has not been determined, it was probably deposited during the early to middle Holocene. The maximum thickness of the unit is not known, but it commonly is as much as 4 m thick. The lower 0.5 m to 1.0 m consists of clast-supported, coarse gravels, which may have been deposited during the Pleistocene, but could have been reworked and deposited during the early to middle Holocene. The gravel are mostly pebble- to cobble-size, with local exposures of boulders ranging in diameter from 25 cm to 75 cm. Most of the gravel are Precambrian granitic and gneissic rock, and Dakota Sandstone. The intercalated sand and silty beds and lenses are interpreted as having been deposited in or near paleochannels. The basal gravels are conformably overlain by 2.5 m to 3 m of poorly sorted clayey and silty sand. The distinctive reddish hue and coarse, columnar structure distinguish the top of Unit 1 from the bottom of Unit 2. To a large degree, the reddish hue is the result of the parent materials; the sediments are derived mainly from Fountain Formation and Lykins Formation redbeds. A relatively thick but weakly developed soil marks the contact between Unit 1 and Unit 2. This soil consists of an A/C horizon in which the A horizon is cumulative. There is considerable variation in the thickness of the A soil horizon throughout the profile. This variable thickness results from differential soil formation and depositional and erosional influences within the valley floor. In places, the contact between the top of the soil and the overlying Unit 2 is undulating and occasionally marked by stone lines, which suggests a period of erosion after landscape stability but before the deposition of Unit 2. Radiocarbon assays on detrital charcoal from a section near the top of Unit 1 at the Recon John Shelter produced ages of 4050 ± 120 B.P. (Beta 24247 [Zier et al. 1996]) and 4400 ± 80 B.P. (Beta 24248 [Zier et al. 1996]).

Lithostratigraphic Unit 2 unconformably overlies Unit 1 over most of the valley floor. Unit 2 consists of two subunits: (1) a lower, grayish brown to brown calcareous sand that grades downward to (2) a basal sand. The lower portion of the unit is thicker and more extensive than the upper portion. Typically, the entire unit is less than 75 cm thick, but the stratum ranges from 25 cm along the valley margins to 1.6 m in paleochannels along the valley axis and in small alluvial fans and rills emanating from the valley sides. Well-stratified beds of sand and silty sand are interspersed throughout the unit.

Besides sediments in the lower portion of the unit being generally coarser and better sorted than those in the upper portion and exhibiting slight color differences, the two subunits are distinguished chiefly by the degree of pedogenesis (soil formation). The upper, younger soil is characterized by an A/C profile. The A horizon in the lower soil, although weakly developed, is fairly thick (30-40 cm). The younger soil consists only of a thin A horizon (5-6 cm), has little to no pedogenic structure, and is currently exposed at the surface along Turkey Creek. Boundary characteristics between the two soils suggest a brief period of landscape stability followed by a period of aggradation with a return to landscape stability. Radiocarbon dates from the older part of Unit 2 at Recon John Shelter range in age from 2000 B.P. to 1000 B.P. (Zier 1989). The weak soil structure of the younger soil in Unit 2 suggests that a brief period of landscape stability elapsed after deposition of the unit ceased. Madole (1990) estimates that deposition of the younger part of Unit 2 correlates with an episode of deposition that occurred between about 800 and 100 B.P. in drainage basins from southern Utah and western

Oklahoma. This period of deposition is believed by Madole (1990:108) to have ceased in Turkey Creek between 150 and 100 years ago.

An eleven-mile-long geomorphological and geoarcheological reconnaissance survey along Red Creek was conducted in 1997 by the Center for Ecological Archaeology, Texas A&M University (Kuehn 1998). The purpose of the study was fourfold: 1) to identify, describe, and map the major sedimentary environments, 2) to place the sedimentary environments in chronostratigraphic order, 3) to correlate the sedimentary environments of Red Creek with those studied in nearby locales (i.e., Madole [1989] for Turkey Creek and Butler et al. [1986] for the Red Creek Burial, and 4) to identify potential areas for buried archeological sites along the Red Creek drainage.

Red Creek is a braided stream west of Turkey Creek and near the western boundary of the FCMR. The deposits of Red Creek are divided into recent channel lag, terrace alluvium (T0, T1, and T2), alluvial fans, and colluvial aprons. The latter two differ in that the alluvial fans are generally larger fan-shaped deposits of alluvially and colluvially derived sediments while the colluvial aprons are formed specifically through slope wash.

The modern floodplain (T0) ranges from 0.5 to 1.0 m above the present channel. It has aggraded in the last 100 years, and no sites older than the historic period would be found in their original context in these deposits or in the recent channel lag. The T1 terrace is also of Late Holocene age. It is best preserved in the broader portions of the valley at elevations from 1.5 to 2.0 m above the channel. This terrace has developed in the last 100 to 150 years. The highest depositional terrace identified is a T2 terrace which is middle- to late-Holocene in age. This terrace fill is recognized by a series of buried soils displaying various stages of pedogenesis. A radiocarbon sample, collected from an exposed hearth, suggests that the fill could be older than 3000 B.P. (Kuehn 1998:22). However, it should be noted that there is some evidence to suggest that the radiocarbon sample was collected from sediments that may be associated with slope wash or alluvial fan deposits; therefore, this date may not represent the timing of floodplain aggradation, but rather of a later episode of slope wash deposition.

The modern floodplain in the Red Creek drainage is correlated to Madole's (1989:284-285) Lithostratigraphic Unit 3 in the Turkey Creek drainage (Kuehn 1998:16). Although Madole identified two distinct surfaces, an upper and a lower, only one surface was identified in Red Creek (Kuehn 1998:16). The T1 terrace in Red Creek may correspond temporally and vertically with the upper Unit 3 surface at Turkey Creek. It is suggested that it also corresponds regionally to episodes of stream aggradation reported from the Colorado Plateau, portions of the Basin and Range Province, and portions of the Southern High Plains, and Northwestern Plains (Albanese and Wilson 1974; Kuehn 1993; Madole 1989). According to Kuehn (1998:17), the T2 terrace appears to correlate with the upper portion of Unit 2 at the Recon John Shelter in the Turkey Creek drainage (Madole 1989).

Both the T1 and T2 terraces appear stratigraphically and chronologically similar to two small remnant terraces identified along the East Fork of Red Creek by Butler et al. (1986). The lower terrace at the Red Creek Burial (Butler et al. 1986) rises 3.0 m above the modern creek bed, and a charcoal sample, collected from a hearth in the terrace fill, produced a radiocarbon age of 1070 ± 70 B.P. A second, highly eroded terrace remnant rises 6.5 m above the modern channel bottom at this site (Butler et al. 1986). According to the authors (Butler 1985; Butler et al. 1986:8), the two terraces most likely correspond to two periods of aggradation defined by Hunt (1954) for southeastern Colorado, the Piney Creek alluvium (higher terrace) and the Post-Piney Creek alluvium (lower terrace).

The alluvial fan sediments that mantle Red Creek alluvial sequences suggest that fan deposition may have been more common during the late Holocene (Kuehn 1998:18). However, colluvial/slope wash deposits often form thin mantles over bedrock, creating thick sediment accumulations with multiple buried soils that can extend down to the modern creek channel. These colluvial aprons and interbedded soils exhibit potentially complex horizontal/vertical relationships with the alluvial sequences (Kuehn 1998:18). Morphology of these sediments is complex, and it is likely that multiple episodes of slope wash deposition occurred during the Holocene.

The potential for archeological sites to be preserved along the Red Creek drainage varies with the age of the site and its geomorphic context. Sites dating from the Historic period, dating less than 200 years old, will be associated with

the T0 floodplain or T1 terrace. Sites older than 3,000 years, however, are limited to the T2 terrace and to the remnants of the Pre-Piney Creek alluvium, and to the alluvial fan and slope wash aprons. Due to the high-energy nature of the deposits within the T2 terrace, site preservation of these older sites may be better in the alluvial fans and slope wash aprons. It is possible, therefore, that Early and Middle Archaic sites are located in some deposits along Red Creek, but that sites dating to the Late Archaic and Ceramic periods possess a better potential than the earlier sites because of the variability in preservation potential that characterizes many of the sedimentary environments of Red Creek (Kuehn 1998:22).

Topography of the FCMR varies throughout, primarily reflecting a landscape typical of the transition from the foothills to the plains. Two of the more geomorphologically interesting areas present within the current inventory are Booth Mountain (high-site probability) in the south-central portion of the base and a vast area north and west of Red Creek (medium-site probability).

Booth Mountain has steep northern slopes and more gentle slopes to the east and west from the crest of the anticline axis, and slopes gently to the south. Several steep-walled tributary drainages are present on Booth Mountain, which pose an interpretive conundrum because the present available moisture could not have produced drainages of these sizes in the not-too-distant past. Tributary sizes indicate that these drainage were once third- or fourth-order drainages (Strahler 1952); presently, they are first- and second- order drainages. Increased precipitation at the end of the Pleistocene would not account for the flow necessary to incise such steep drainages through the Purgatoire and Dakota Sandstone and into the underlying Jurassic Morrison Formation. That the drainages are deeply incised into pre-Cenozoic formations suggests that they were formed by ancient fluvial processes.

In order to explain the origin of these drainages, present day topography, bedrock lithology, and aerial photographs were researched. It is suggested here that Table Mountain and Booth Mountain are the physical expressions of the once continuous Red Creek/Turkey Creek anticline, which is now separated by Sullivan Canyon. Regional uplift of the Front Range and the adjoining Great Plains in the very late Tertiary resulted in fluvial degradation and canyon cutting. Large tributaries from the Front Range, supplied with glaciofluvial recharge from the melting Pleistocene glaciers, eroded the Cenozoic sediments from the anticline. As the cover of these rocks was eroded, the streams were lowered onto the folded and faulted Cretaceous and Jurassic Formations. Supplied with a heavy discharge and increased sediment load, the streams from the uplifted Front Range created a braided channel pattern. These braided streams flowed in a generally southward pattern and eroded the softer sediments from the anticline. The course of Sullivan Canyon was probably formed during the Pleistocene through weathering of the overlying Jurassic, Cretaceous, and Tertiary sediments through fluvial processes. The softer rock has since weathered in places below the crest of the anticline to create the flat valley bottom of Sullivan Canyon that separates the two, once-continuous, folded and faulted anticlines. At a later date—probably during the early Quaternary—water from the various streams flowing across the anticline was captured through headward erosion and diverted into a single large drainage. With the increased velocity, Sullivan Canyon continued to erode into the softer Jurassic sediments to create the broad valley of Sullivan Canyon as it is seen today.

The steep north slopes of Booth Mountain and the west slopes of Table Mountain are eroded into the Morrison and Ralston Creek lithostratigraphic units. Three prominent notches are visible along the northern rim of Booth Mountain, while similar notches are visible along the western slopes of Table Mountain. These notches mark the courses of pre-Holocene stream channels. Small interior basins that support meadow flora often appear at the downstream sides of the notches. These basins are superimposed over Jurassic claystones and limestones. These impermeable strata trap rainwater and, to a lesser extent, snowmelt, and through interflow, direct the water into the larger drainages. The water retained in the basins permits meadow ecozones to survive in an otherwise piñon and juniper woodland.

The relict courses of two streams are clearly visible at the northern end of Booth Mountain. These stream courses are manifested as steep-walled canyons, one that originally flowed southwest into Booth Gulch and a second that flowed southeast into Turkey Creek. Both of these stream courses are close to prominent notches at the top of Booth Mountain. The original channel course was from the north through the notch and to the east. Today, the drainage exits Booth Mountain through Booth Gulch and takes a bend to the north to enter Pierce Gulch, but the drainage may have at one time continued along a more southerly route to Booth Gulch. These seemingly out-of-place drainages on Booth and

Timber Mountains represent relict drainage patterns that were diverted from their courses into Sullivan Canyon through either stream capture or isolation due to the weathering of the erodible Jurassic Formation. Steep-walled drainages, small interior basins superimposed onto Jurassic strata, and prominent notches are the topographic expressions of ancient hydrological systems.

Climate

FCMR lies in a region characterized by a mid-latitude, semi-arid continental climate with sharp seasonal variations. Summers are long and warm; winters are short and occasionally very cold. July has mean annual highs of 88° F (31° C). January is the coldest month, with a mean low of 15° F (-9° C). Precipitation is erratic and mainly falls as heavy thunderstorms during the months of April through September (Zier et al. 1987:1-13). The average annual precipitation is 17.5 inches (44 cm).

Two models for ancient climatic patterns in North America are commonly used by archeologists. The first, proposed by Antevs (1955), envisages climatic change as slow and gradual. Consequently, he defined only three major climatic episodes for the Holocene (or Neothermal, in his nomenclature): (1) Anathermal (10,150-7000 B.P.), (2) Altitheamal (7000-4500 B.P.), and (3) Medithermal (4500 B.P.-present).

Antev's general model has been augmented by one based on the European Blytt-Sernander model, which identifies short periods of climatic stability, or dynamic metastable equilibrium, interrupted by rapid changes to new stable states (Wendland and Bryson 1974; Wendland 1978). The episodes are as follows: (1) Late Glacial 13,000-10,030 B.P., (2) Pre-Boreal 10,030-9300 B.P., (3) Boreal 9300-8490 B.P., (4) Atlantic 8490-5060 B.P., (5) Sub-Boreal 5060-2760 B.P., (6) Sub-Atlantic 2760-1680 B.P., (7) Scandic 1680-1260 B.P., (8) Neo-Atlantic 1260-850 B.P., (9) Pacific 850-400 B.P., (10) Neoboreal (Little Ice Age) 400-100 B.P., and (11) Recent 100 B.P.-present. There is, however, much regional variation in the dating and severity of these episodes because of their transgressive nature (Wilson 1988); therefore, more local studies are necessary for any intensive study of human-environment relationships.

The Biotic Environment

Three vegetation groups are found in the reservation. They are coniferous forest, scrub, and grassland (Dames and Moore 1978). The first is characterized by ponderosa pine, piñon, juniper, and Gambel's Oak. This group is found primarily in the Booth Mountain and Sand Canyon areas. The second is represented mainly by piñon-juniper stands, sometimes with a Gambel's Oak understory. Nut harvests would have been valuable sources of autumn and winter food. Species such as blue grama and buffalo grasses are found mainly on the reservation's eastern edge.

Fauna is typical of the transitional nature of the reservation's location between plains and mountains. Historically, large mammals included bison, elk, both mule and white-tailed deer, antelope, bear, mountain lion, bobcat, and wolf, but important animals like bison and wolf are no longer present. Smaller animals such as coyote, fox, beaver, jackrabbit, cottontail, skunk, and an assortment of squirrels and rodents frequent the area. A variety of raptors are present. Rattlesnake and other reptiles are common (Zier et al. 1987:1-15-16).

Perhaps the most important prehistoric economic resource was the bison (*Bison bison bison*). It provided aboriginal groups with food, and materials for clothing, utensils, glue, bindings, and tipi covers (Roe 1951; McHugh 1958). It is difficult to gauge the natural migratory movements of this animal, and the impact bison had on aboriginal settlement patterns, because their movements had been disrupted by European immigration by the time the first commentators on bison movements had appeared in the region. Nineteenth-century travelers referred to bison being in the mountains in and around the headwaters of the Arkansas River (Roe 1951:548-549). Interestingly, these references indicate that these areas were *wintering* grounds, a reversal to what would be expected based on migratory studies elsewhere that showed bison moving into the lower foothills for the winter months. However, as previously noted, it is possible that by the time these observations were made (1844 and 1858), their natural migratory patterns had already been seriously disturbed. Alternatively, the bison wintering in the headwaters of the Arkansas River and throughout the Salida area may have summered at much higher elevations to the west.

THE CULTURAL ENVIRONMENT

The location of Fort Carson in the foothills of the Rocky Mountains means that prehistoric populations undoubtedly had cultural ties to, and were influenced by, contemporary cultures in the adjacent plains and mountains. There is even evidence that at certain times during prehistory southeastern Colorado was influenced by cultures of the American Southwest. The following discussion is intended to allow the reader to place this volume into a wider regional perspective. It relies upon, but is not intended to replace, the excellent syntheses provided by Anderson (1990), Athearn (1985), Cassells (1997), Eighmy (1984), Guthrie et al. (1984), Mehls and Carter (1984), and Zier et al. (1987), to which the reader is referred for more detailed and specific information.

The Regional Context

To place Fort Lewis College's work at Fort Carson in context, the following section briefly reviews the archeology of both the plains and the mountains (in particular the Front Range). It draws primarily on historical overviews provided by Frison (1973), Wedel (1983), Duke and Wilson (1995) and Krause (1998) for the Plains, and Cassells (1992) for the mountains.

Plains archeology was a relatively late entry into American anthropology, probably for two reasons. First, it lacked the monumental architecture and the sophisticated and well-preserved material culture that had attracted early students to places like the Southwest. Second, influential early anthropologists, from Clark Wissler to Alfred Kroeber, had declared the region uninhabitable before the acquisition of the horse (Frison 1973:151).

Throughout the 1920s, however, antiquarians began working in the Plains. There were still no systematic investigations or excavations, and some strange theories prevailed: for example, the supposed Welsh influence on the Mandan of the Middle Missouri region (Frison 1973). The "backwater" status of Plains archeology changed in the 1930s as a result of the number of early human discoveries found in the area, which put Plains archeology in the forefront of this study. Sites like Lindenmeier and Dent in Colorado, together with Clovis and Folsom in New Mexico, were discovered in this decade. During this same decade, theoretical contributions from William Duncan Strong, Waldo Wedel, and Alex Krieger helped Plains archeology gain a national stature (Duke and Wilson 1995:3), and for a while the Plains became a "high-status" study.

The second boost to Plains archeology resulted from the threatened loss of thousands of archeological sites in the Missouri River floodplain through reservoir construction for recreation, storage, and hydroelectric facilities (Krause 1998:58). Surveys to locate and record these sites began in 1946 under the direction of the Smithsonian Institution, with field headquarters at the University of Nebraska. The final survey was completed in 1968. Massive data banks were produced, and a regional culture history was constructed (Frison 1973). Government involvement in Plains archeology became even greater in the 1960s with the onset of the modern era of cultural resource management. However, because large portions of the Plains are privately owned and, therefore, not under the jurisdiction of federal conservation laws, the importance of archeological studies of large federally owned areas such as the FCMR becomes especially great.

Despite the early important theoretical contributions of Plains archeologists like William Duncan Strong (1935) and Waldo Wedel (1936), Plains archeology has never flirted with archeological theory for its own sake. Rather, it has been dominated by the practical necessities of dating sites and erecting spatio-temporal frameworks (Duke and Wilson 1995), although some elements of processualism have become important mainstays of contemporary Plains archeology (e.g. Calabrese [1972], Johnson [1988], Bamforth [1988], or Kelly and Todd [1988]). Even postprocessual studies have made their way onto the Plains (Duke and Wilson 1995). The advocacy of particular theoretical paradigms seems, however, to have been driven primarily by the need to understand the prehistory of the Plains, as opposed to Plains data being used merely as a testing ground for proposed theoretical contributions to the discipline at large.

The cultural taxonomies and classifications used for the southern Colorado Plains are implicit amalgamations of taxonomic systems proposed by McKern (1939) and Willey and Phillips (1958). Thus we note the interchange of McKern's "focus" and Willey and Phillips's "phase" throughout much Plains archeological writing (see also Chomko et al.

1990:9). The terms "stage" and "period" have also become virtually synonymous. This confusion is particularly apparent in discussion of the Archaic—a confusion fueled by the use of the term "Archaic" by Frison et al. (1991) for the Middle Prehistoric period. Although this interchange is acceptable for Wyoming, where the Altithermal of the early Middle Prehistoric Period created the need for *Archaic-stage* adaptations, it is less applicable elsewhere in the northern Plains, where a commitment to large-animal hunting may have continued unabated, despite the stress caused by Altithermal climatic deterioration.

It is fair to say that the processes behind the patterns that constitute the culture-historical sequences of southeastern Colorado are still essentially unknown. For example, although lengthy discussions on the (dis)similarities between projectile points and other diagnostic materials have been made by numerous workers (e.g., Gunnerson 1987), there has been less discussion on whether these patterns are the result of migration, diffusion, or other cultural factors. Projectile-point styles seem to represent distinct horizon styles that crosscut other cultural boundaries, and it is apparent that an adequate understanding of the area's prehistory cannot be completed until these variables have been evaluated.

Eighmy (1984:10) has divided the chronology of southern Colorado into four periods, and we apply these to the Fort Carson area: Paleo Indian, Archaic, Ceramic, and Protohistoric/Historic. We have excluded discussion of the pre-Paleo Indian period, as defined by Krieger (1964), because of its absence thus far in this part of Colorado.

Paleo Indian period The Paleo Indian period, which dates from approximately 12,000 B.P. to 7500 B.P., is a well-documented phenomenon in the Colorado Plains, the area producing some of the period's most significant finds. The Paleo Indian period straddles the transition from terminal Pleistocene to early Holocene environments with an accompanying change in fauna and flora. It is typified by nomadic hunters and gatherers, concentrating on the killing of large fauna, such as mammoth and now-extinct forms of bison. The Paleo Indian Period is divided into the Clovis (11,500-11,000 B.P.), the Folsom (11,000-10,200 B.P.), and the Plano (10,200-7500 B.P.) Traditions. Although both Clovis and Folsom Traditions are identified by distinctive fluted points, the processes of transition between the two are unclear, and Frison et al. (1991) have proposed a transitional Goshen complex. The Plano tradition is characterized by a proliferation of point types, which may reflect increased territoriality and technological specialization as greater resource stability preempted the need for long-distance interaction networks (Hayden 1982:119).

The presence of humans in southern Colorado and surrounding areas during the Paleo Indian period is recorded primarily by surface finds (for example, there are two Folsom finds on the Chaquaqua Plateau [Campbell 1976]). This area is close to the Folsom type-site, located just southeast of Raton, New Mexico. The bison kill-site of Olsen-Chubbuck (Wheat 1972) is also relatively close, and it is likely that more Paleo Indian sites will be found in the future. Within 200 miles of Fort Carson are the well-known Paleo Indian sites of Cattleguard, Lindenmeier, and Jurgens.

Archaic period The Archaic period begins about 7500 B.P. in southern Colorado and, as a whole, sites attributed to this period are well represented. It is characterized by a shift to a wide subsistence spectrum of hunting and gathering, an increase in the use of ground stone tools used in plant preparation, and, at the end of the period at least, greater sedentism, which perhaps is a precursor to a dependence on cultivated plants.

Early Archaic period (7500-5000 B.P.) sites are rare in southern Colorado (Eighmy 1984:68). Indeed it is possible that during this period, which coincides with the Altithermal warming episode, the Plains were abandoned or minimally occupied by humans (Reeves 1973; Benedict and Olson 1978; Buchner 1979). The Middle Archaic period (5000-3000 B.P.) is well represented by both radiocarbon and typologically dated components in southern Colorado (Eighmy 1984). Point types bear a resemblance to Southern Plains and Southwest types (including the Pecos Culture). Archeological evidence for the Late Archaic period (3000-1800 B.P.) in southern Colorado is provided by a series of sites—including stratified rock shelters—such as Carrizo, McEndree Ranch, Medina, Recon John (which is located on the FCMR and described in more detail below), and Trinchera. The last site provided not only stratigraphic sequences, but also organic material and bones that indicate an emphasis on small-game hunting (Wood-Simpson 1976:177). Archaic sites in southern Colorado are sufficiently numerous to allow the reconstruction of settlement systems: for example, Alexander et al.'s (1982) study of the archeology of the FCMR, Lutz and Hunt's (1979) study of the Purgatoire and Apishapa highlands, and Eddy et al.'s (1982; 1984) study of the John Martin Reservoir.

Ceramic period The Ceramic period, according to Eighmy (1984), is not fully *formative*, because it is still based primarily on hunting and gathering, and it lacks established village life. Eighmy divides the Ceramic period into Early and Middle subperiods. Gunnerson (1987:97) and Zier et al. (1987:2-13) have added a Late subperiod, which corresponds to Eighmy's Protohistoric period. The major technological innovations of the Ceramic period are, of course, ceramics (albeit in small numbers), the bow and arrow, stone architecture, and the appearance, in small quantities, of cultivated plants; in particular, maize.

The Early Ceramic period dates between A.D. 200-1000, and it corresponds to what has been termed the Plains Woodland tradition (Eighmy 1984). We prefer the former designation in view of the rather oxymoronic nature of the latter term. Cultures of this period appear to represent an indigenous outgrowth from earlier Archaic cultures.

After about A.D. 450, there appear to be differences between sites found along the Arkansas and Platte River systems. Sites along the Arkansas River system are assigned to the Graneros focus (Withers 1954), which is characterized by cord-marked pottery, corner-notched projectile points that are later replaced by side-notched forms, and slab-constructed circular dwellings. The Parker focus, which might be merely a geographical variant of the Graneros focus (Butler 1986:213), or vice-versa, is heaviest in the Denver Basin and South Platte River Valley region, and may extend to the San Luis Valley. According to Baugh (1994:269), the most recent (Early Ceramic period) component at the Recon John shelter, located on the FCMR, may represent the most southerly and westerly extension of the traditional Plains Woodland complex, as exemplified by the Valley and Keith Foci of the Central Plains.

The Middle Ceramic period (A.D. 1000-1500) of eastern Colorado contains variants of the Plains Village tradition, such as the Upper Republican complex, the Upper Purgatoire complex, the Apishapa phase, and the Upper Canark variant. The Upper Republican complex (A.D. 1000-1450) is characterized as a sedentary culture based on hunting, gathering, and horticulture (Gunnerson 1987:68-71). It is located primarily in southern Nebraska and northern Kansas. The complex is associated with the prehistoric Pawnee by Strong (1935). The Upper Purgatoire complex (Dick 1963) is dated between approximately A.D. 1000-1225 (Cassells 1997:223-224; Wood and Bair 1980:15), and is divided into three phases: Initial Sopris, Early Sopris, and Late Sopris (Cassells 1997:223-224). Subsistence during this time was a mixture of foraging and farming, and its architectural and ceramic styles reflect both Plains and Southwestern influences. It has recently been suggested that Sopris phase sites represent an archeological frontier of the northern Southwest (Mitchell 1996). Alternatively, Turner (1980) has suggested that Sopris phase populations may be Athabascan, based on a fairly high frequency (23%) of triple-rooted molars in a Sopris phase skeletal assemblage from the Trinidad Lake area.

The Apishapa phase was first recognized by Renaud (1931a) and formally defined by Withers (1954). It may have antecedents in the Graneros focus (Baugh 1994:269). It is characterized by villages—of varying size—composed of upright slab-stone houses, often in defensible locations. The proximity of these sites to arable land (Campbell 1969:418-419) suggests some level of commitment to horticulture. Ireland (1968) proposed that at the Snake Blakeslee site (Gunnerson 1989) occupants subsisted primarily on corn and bison. Campbell (1969), using supposed similarities between Apishapa sites and contemporary materials in the Texas and Oklahoma Panhandles, placed the phase into the Panhandle Aspect. Lintz (1978, 1984, 1986) in a reworking of this material, proposed the Upper Canark variant (A.D. 1200-1500), which contains the Apishapa phase and the Antelope Creek phase of northeastern New Mexico and the Texas and Oklahoma Panhandles. Baugh (1994:282) has further added to the Upper Canark variant the Zimms complex of western Oklahoma and the eastern Texas Panhandle, and the Burial City complex of the northeastern part of the Texas Panhandle (see also Drass 1998:418, 422-425).

The Late Ceramic or Protohistoric period (A.D. 1500-1800) is characterized by ethnographically recognized tribes who were either hunters and gatherers, or part-time horticulturalists. Aboriginal inhabitants during this period had access to European goods, but were not in regular face-to-face contact with Europeans. A major Colorado Plains group was the Athabascans (specifically the Apache), who migrated south as part of the large Athabascan movement that began in Alaska sometime in the first millennium (Duke and Wilson 1994; Vickers 1994). They grew corn, beans, and squash, hunted extensively, and traded with Puebloan groups in northern New Mexico. These groups are represented archeologically by the Dismal River Aspect (A.D. 1675-1725), which is found throughout large portions of the western plains including eastern Colorado (Gunnerson 1987:102-107).

Archeological evidence suggests that the Apache entered southern Colorado sometime after A.D. 1300 (Campbell 1969:496). Excavations at a series of stone-circle sites associated with the Eastern Apache, located on the Carrizo Ranches on the Chaquagua Plateau, were radiocarbon dated to the 14th century (Kingsbury and Gabel 1983). These sites also contained Pueblo IV pottery indicative of interaction with groups to the south. Other tribes of note during this period were the Comanche and the Arapaho and Cheyenne. A more detailed review of the ethnohistoric evidence is found in the section on Fort Carson ethnohistory.

Front Range and Rocky Mountains Prehistory

The Front Range, as a unit of study, consists of that portion of the eastern flank of the Rocky Mountains from southern Alberta in Canada to southern Colorado. Although the eastern slopes of the Rockies provide a dramatic and abrupt boundary to the western plains, in many areas, most notably Wyoming and, to a lesser extent, Montana, the mountain wall is broken by large basins that serve as western extensions of the plains grasslands. Indeed, Chomko (1991), in referring to Wyoming, has shown how that state's prehistory has been confused by mistakes over what constitutes *plains*, and by extension, therefore, in the application a priori of Plains cultural taxonomies to the state's archeology.

Archeological investigations of the Rocky Mountains are recent, beginning in earnest only in the 1970s with the advent of federal conservation laws in both the United States (Matlock and Duke 1992:176) and Canada (Ronaghan 1986:passim). Prior to this period, anthropologists, beginning with Alfred Kroeber (1939), believed that the mountains were uninhabitable before acquisition of the horse. Archeologists, turned away by limited access to high mountain areas (Cassells 1992:12-13), were not inclined to test Kroeber's proposition.

Despite the massive increase in the database as a result of government-mandated investigations, much of the archeological record of the Front Range and Rockies is still "spotty," as a result not only of the nature of the archeological record itself (cf. Weimer 1995:96), but also of the rather "shot-gun" approach to investigations. Long-term research projects—such as Benedict's (1992; Benedict and Olson 1978) in the Indian Peaks Wilderness Area of Rocky Mountain National Park—appear as exceptions to the rule. Thus, long-term archeological investigations at locations such as FCMR are important for their contribution to our archeological knowledge, not only of the immediate area but also of the Front Range in general.

Despite the different goals of the various individual research and management problems that have been conducted or are in progress along the Front Range and in the Rockies, and despite the different backgrounds of the investigators involved in them, it is possible to isolate a number of issues that seem consistently to be raised. The first issue concerns the nature of the archeological record itself. This record is a product of essentially nomadic inhabitants existing in environments not conducive to good archeological preservation (Benedict 1992:1; Weimer 1995:96). Consequently, archeological interpretation has tended of necessity to oversimplify complex patterns of human behavior. It can be said that in these areas archeology, as with most hunting-and-gathering situations, can define only *average* behavior patterns, "that is, how groups in general solved certain problems over long time periods" (Driver 1978:125). All archeologists working on the Front Range are hampered by an inadequate temporal resolution for their sites, which causes great variation between *precise* and *archeological* contemporaneity, to use Higgs and Jarman's (1975:5) terms. This irresolution, caused by the nature of the archeological record, is at the root of all the other issues discussed below.

The second issue concerns the degree to which the culture chronologies of the Front Range and mountains can be based on those of the adjacent areas, especially the Plains (cf. Black 1991). This ambivalence has led to the application of oxymorons, such as foothills-adapted, Plains Woodland cultures (recognized as such by Black [1994]) in the Hogbacks west of Denver). More problematically, the importation of external systematics has hampered a fuller understanding of the actual cultural dynamics of the area. Recognizing heterogeneity in the archeological record might help in constructing local chronologies, but is of less value in the reconstruction of actual prehistoric *behavior*. For instance, witness the relatively small differences in assemblages between the Hogback, Graneros, and Parker Phases (Cassells 1997:210). Our inability to correlate artifactual heterogeneity with actual behavioral patterns, whether they are at the level of seasonal facies of a single economy or at the level of distinct ethnic groupings, will continue to confound the creation of more sophisticated and realistic prehistoric behavioral models.

The third issue, obviously related to the first two, concerns the specific ways in which the Front Range and Rocky Mountains were exploited prehistorically. The first strategy regards these two areas as marginal, exploited by prehistoric peoples whose primary territories lay either on the Plains, on the Great Basin, or in the Southwest. As noted earlier, ethnographers like Kroeber were disposed to this strategy. The second strategy sees these areas simply as part of a total seasonal round that encompassed other adjacent areas. Examples of this strategy have been proposed by Bender and Wright (1988), Quigg (1974), Duke (1978), and Benedict (1992). The third strategy sees the Front Range and mountains as supporting year-round nomadic populations. This strategy has been proposed most forcefully by Brian Reeves (1981) in Southern Canada, who has gone so far to say that at least in certain time periods the Front Range was a separate cultural area supporting year-round residents who considered themselves ethnically separate from resident groups both to the east and west. The third strategy is also represented by Black's (1991) Mountain tradition. This tradition existed from about 9500 B.P. to at least 4500 B.P., with a continuation in certain areas until 700 B.P. when it was replaced by assemblages assignable to the prehistoric Numic (Ute and Eastern Shoshone). Spatially, the Mountain tradition is found in upland areas as far north as southern Montana and as far south as northern New Mexico. Included in this tradition are the following complexes: Rio Grande, Uncompahgre, Rocker, Mount Albion, Magic Mountain, and Apex. Important sites along the Front Range, such as LoDaiska, Wilbur Thomas, and Willowbrook, probably served as winter residential bases, as did sites along the foothills west of the Continental Divide, such as Deluge Shelter, Sisyphus Shelter, Taylor, and Moore (Black 1991:13). This tradition argues for a year-round exploitation of the mountains by nomadic to semi-sedentary groups, for a long-term continuity in patterns of exploitation, and for an archeological identity for the mountains that is distinct from adjacent lowland areas, beginning as early as the late Paleo Indian period (Black 1991:1).

It is doubtful whether the *present* archeological record (anywhere along the Front Range) allows us to adequately test such hypothetical strategies. Nevertheless, merely their reasonableness as *hypotheses* throws into doubt any complacency archeologists might have about the hopes of soon achieving any degree of understanding of prehistoric exploitation patterns in the area (Duke 1978).

Fort Carson Prehistory

Generally, sites become more common at Fort Carson as they get more recent, reflecting not only possibly larger human populations, but more likely the better preservation potential of more recent archeological resources (Zier et al. 1987:2-44). The numerous surveys conducted on the reservation in the last ten years suggest that the majority of datable prehistoric components fall between approximately 1500 B.C. and A.D. 1500, while most datable historic structures date to the last few decades of the 19th century and the first half of the twentieth (e.g., Van Ness et al. 1990; Jepson et al. 1992).

Prior to the Fort Lewis inventory in 1996, there was only one piece of evidence on the FCMR that belongs to the Paleo Indian period, an isolated projectile point dated to approximately 8000 B.P. and it is from a single multicomponent open lithic scatter (Zier et al. 1987:2-43). Since that time, additional Paleo Indian projectile point fragments have been found at multicomponent sites in the south and central portions of the base. These point types and associated sites are discussed in the reports by Fort Lewis College (Charles et al. 1997; Charles et al. 1999b).

Although definite Archaic sites are rare on the reservation, most flaked-lithic sites are undated, and so many of these could be Archaic in age. An important multi-component site on the reservation is the Recon John shelter (Zier and Kalasz 1991). This rock shelter contained three radiocarbon-dated components: Middle Archaic (4400-3700 B.P.), Late Archaic (2000-1800 B.P.), and Early Ceramic (1800-1000 B.P.). Evidence for a hunting-and-gathering economy, with some degree of maize horticulture, was recovered from this site.

Early Ceramic period sites are common at Fort Carson (Zier et al. 1987:2-9), although Zier cautions that some of these may be misidentified Middle Ceramic sites, because both periods have cord-marked pottery. There are many Middle Ceramic sites in the reservation, especially in its southern part. Apishapa-phase lifeways have been elucidated through long-term investigations at the Avery Ranch site, the most recent of which were conducted by Centennial Archaeology in 1985 and 1986 (Zier et al. 1988; Zier et al. 1990). The Avery Ranch site, a multi-functional camp occupied in a single episode during the fall, dates to the 13th century. Zier identified four major activity areas, three of which contained architectural remains. Large quantities of butchered bison bone and charred seeds, especially *Chenopodium*

(goosefoot), indicate a hunting-and-gathering economy, although a small amount of maize was also recovered. In general, Apishapa lifeways seem to have been organized around the efficient gathering and storing of wild plants, the hunting of deer, antelope, and some bison, and the farming—albeit limited—of at least five different varieties of maize (Baugh 1994:278).

In keeping with the generally processual nature of archeological research conducted during the 1970s and 1980s, the Fort Carson prehistoric data base has been subjected to various types of settlement modeling (Zier et al. 1987:2-45-51). Zier et al. (1987:2-47-51) reject inductive-based models in favor of deductively generated predictive models that allow for a better control of sample universes. Despite the persuasiveness with which Zier makes his case, inductive models at least avoid the problem of a priori assuming which environmental variables were important in the selection of specific site locations (cf. Butzer 1982; Weimer 1995).

Predictive models for the Turkey Creek, Booth Mountain, and Red Creek areas were generated by Zier et al. (1987:2-86). Booth Mountain provided the most surprising results in terms of the frequency and distribution of archeological sites in an area assumed to be too rugged to have supported a large prehistoric population. It was determined that the highest site sensitivity lay on the southern and western slopes of the mountain, with sites located along the drainages that flow into Booth Gulch rather than into Turkey Creek. It is possible that the very inaccessibility of Booth Mountain made it an attractive habitation. Very few sites were found on the east half of the mountain except for the rock art that is pervasive in Turkey Creek Canyon.

The subsistence and settlement model for Fort Carson, on which the predictive modeling is based, supposes that during the prehistoric period the area was part of a human migratory pattern that ranged from the high mountains to the open plains. A variety of animals and plants, of which piñon nuts are considered of fundamental importance, were used (Zier et al. 1987:2-59). In keeping with studies elsewhere (e.g. Quigg 1974; Duke 1978), Zier et al. (1987:2-52) have proposed that large, winter base camps were established in the more sheltered foothills, along the Arkansas River and its permanent tributaries. Smaller camps, established in the spring and used throughout the rest of the year, were located along different routes radiating from the winter base camps in response to the seasonal availability of particular resources. In this regard, it is important to acknowledge that such annual subsistence rounds may have been far-ranging. Rockafellow's (1881) history of Fremont County, for instance, described historic Utes as summering in the higher elevations of the Rockies before coming down to winter base camps in the Arkansas River Valley, near Cañon City. Thus, prehistoric sites found in the Monarch Pass area (Hutchinson 1990) may have relevance to a full understanding of subsistence patterns in the Fort Carson area, especially given that the Arkansas River Valley was the primary communication corridor to the Monarch Pass area during the historic period.

Fort Carson Ethnohistory and History

From the initial period of European contact, which began in the middle of the 16th century, Plains Indians underwent profound cultural, social, and economic changes, descriptions of which need not be replicated here. Initial contact was at first indirect, in the form of long-distance trade (beaver and muskrat pelts in exchange for numerous European goods), but this was replaced by face-to-face contact and exchange. Beaver trapping (and later bison-hide tanning) brought the Plains into the world economic system (cf. Lewis [1942] for an early surgical analysis of its economic and social effects). Acquisition of the horse and gun helped individual Indian groups to resist European expansion, but often this was done by taking over the territories of Indian groups who were not so well equipped. The horse also caused major economic and social changes to Indian tribes, and these are well documented by Roe (1955). In general, the period of European contact, then, can be seen as one in which Native Americans were forced to become much more mobile and to cope as best they could with the European economic nexus into which they had been so unwillingly drawn.

It is difficult to determine precisely which Indian tribes used the Fort Carson area because of its location on two major physiological zones (Plains and Mountains), its proximity to three culture areas (Plains, Mountains, and Southwest), and its proximity to important passes and trails used by many different groups. However, based on general knowledge of the ethnohistoric period in southern Colorado, and also specific references to places like Manitou Springs, some degree of confidence can be placed in stating that the area was utilized by at least four tribes: the Apache; Comanche; Arapaho;

and Ute (Zier et al. 1987:2-166-171).

Southern Plains tribes first contacted Spanish groups beginning in 1541, when Coronado led an expedition across parts of New Mexico and Kansas (Hammond and Rey 1940). Coronado's description of the groups he met provides a good description of peoples who were still essentially "prehistoric." Coronado encountered two groups called "Querechos" and "Teyas", although there is dispute as to whether both were Apache, or Apache and Caddoan groups respectively (cf. Weber 1990:XVIII-5-6). During the 16th century, more Spanish expeditions were sent throughout what was to become northern New Mexico and adjacent regions to extend Spanish sovereignty and to convert the Indians to Christianity. Of particular interest is the 1593 expedition of Francisco de Bonilla and Antonio de Humana. Although their exact route is not clear, it is possible that they traveled through the Fort Carson area (Zier et al. 1987:2-94).

Beginning in the late 17th century, the Apache, mounted and heavily armed, became a dominant force on the Southern Plains, raiding for both horses and slaves that were then traded to the Spanish (Weber 1990:XVII-7). Despite the unstable relations between Apache and Pueblo groups, it was, nevertheless, the former to whom the latter fled after a series of revolts (the biggest revolt started in 1680 and lasted for 12 years). In the early part of the 17th century, the Taos and Jemez Pueblos revolted against Spanish rule and established a new settlement called El Cartelejo in western Kansas, which was under the control of the Apaches. It is unclear whether El Cartelejo was a specific pueblo or a region, however (cf. Forbes 1960; Schroeder 1974). By the 1660s the Spanish had moved the fleeing Puebloans back to their original settlements (Forbes 1960:137-139), although the area continued to act as a refugium for Puebloan and Apache groups trying to escape Spanish domination. Throughout the 18th century, the Apaches lost both power and territory as the Comanche expanded, as eastern groups like the Kansa, Oto, Iowa, Ponca, and Omaha moved west, and as the area became a geopolitical "football" arena contested by both France and Spain (Schlesier 1972).

The Comanche, together with the Ute, began to move into the plains of southeastern Colorado and adjacent Kansas at the beginning of the 18th century (Weber 1990:XVII-13). Notwithstanding their defeat by de Anza in 1779 near modern-day Pueblo (Athearn 1985:18), the Comanche continued to expand their hegemony throughout the southern Colorado plains and areas to the south and east during the 18th century. The Utes raided with the Comanche until the middle of the 18th century, when the Comanche turned on them. The Utes were originally mountain dwellers who made incursions into the Plains through many mountain passes (Hyde 1976:54-57; various papers in Nickens 1988).

Ulibarri, who in 1706 brought back dissident Pueblo Indians from refuges across the Arkansas River, reported that the Utes and Comanches were raiding the Apache between present-day Pueblo and Trinidad, although they had not yet succeeded in driving them out completely (Hyde 1976:64). A later Spanish expedition in 1719 led by Governor Valverde found Apache still occupying southeastern Colorado (Schroeder 1974). Valverde's professed objective was to prevent Ute and Comanche raids on the Apache, although the leisurely nature of the expedition suggests that he had no urgency in accomplishing this (Hyde 1976:67-70). At least a secondary objective of the expedition was to show the Spanish flag in response to increasing French incursions into Spanish territory (Athearn 1985:14-16). These Spanish incursions increased until the outbreak of the French-Indian War of 1754 (Athearn 1985:17). During the latter part of the 18th century, increasing Arapaho and Cheyenne incursions into the western Plains began to shunt the Comanche southward (Hyde 1976), and in 1786, the Spanish made a peace treaty with both the Comanche and the Ute (Athearn 1985:18).

During the 18th and early part of the 19th centuries, southern Colorado was infiltrated by *comancheros* (Hispanic and Pueblo Indian traders) and *ciboleros* or buffalo hunters (Weber 1990:XVII-15; Baugh 1994). The *comanchero* trade was based on well-established prehistoric trade patterns between Pueblo farmers and Plains bison hunters (cf. Spielmann 1991). Initially involving native corn and bison products, by the beginning of the 18th century the trade system incorporated Spanish goods, including horses and guns, as well as slaves. Trade fairs, such as the one at Taos, became an important component of the New Mexico economy (Carrillo 1990:XVIII-8). This changed, however, under American rule, since the *comancheros* were now considered thieves and villains (Carrillo 1990:XVIII-9). *Cibolero* hunting comprised huge bison-hunting expeditions from New Mexico into the adjacent plains to take back bison products to their home settlements. These expeditions climaxed in the early 19th century.

Up to 1821, the ethnohistoric period of southern Colorado, as for adjacent areas, was characterized by processes that led both to the demise of aboriginal groups as independent entities and to increasing control over these areas by Spanish who resided in areas to the south. However, southern Colorado was never successfully colonized by the Spanish (Carrillo 1990:XVIII-7), and the area was important to the Spanish primarily for the resources that it offered. After 1821, what Carrillo (1990:XVIII-1) calls the second period of historical culture change in the area was initiated. Mexican independence intensified trading opportunities between southern Colorado and Hispanic settlements to the south. This second period lasted until the Mexican War of 1846-48, which effectively ended Mexican domination of the area.

The earliest American interest in the Fort Carson area resulted from attempts to explore beyond their recognized territorial boundaries because of the Louisiana Purchase of 1803, which put newly-acquired American territory immediately adjacent to long-held Spanish lands (Athearn 1985:25). In 1806, Zebulon Pike led an official U.S. expedition up the Arkansas River into what would become Colorado. Pike traveled up the Arkansas as far as South Park and then returned to journey to Santa Fe as a "prisoner" of Spanish troops. Pike's foray was followed by a wave of fur trappers and then by more scientific and military expeditions (Zier et al. 1987:2-100), such as the Long (1820), Dodge (1835), and Fremont (1843-44) expeditions, all of which went through or very near to Fort Carson. Most important, Bent's Fort was founded in 1829, at the mouth of either the Huerfano River or Fountain Creek (Zier et al. 1987:2-104). This fort dominated regional trading for the next twenty years. There was little that the waning Spanish power could do to oppose increased American incursions into their lands (Athearn 1985:27). Finally, in 1822, the Republic of Mexico declared its independence from Spain, and the New Mexican governor, Facundo Melgares, immediately opened the province to traders of all nationalities (Athearn 1985:27).

The "American Period" officially began in 1848 with the annexation of Mexican lands by the U.S. under the terms of the Treaty of Guadalupe-Hidalgo (Athearn 1985:31; Carrillo 1990:XVIII-14). Manifest Destiny and the spirit of western entrepreneurship swept the study area. In 1851, the U.S. government decided to allocate specific tribal territories to the individual groups (Weber 1990:XVII-19-20), and in 1867 the government signed a treaty with many southern Plains tribes. This led ultimately to the Reservation Period and the removal of tribes from their homelands. The Comanche, for example, were placed on a reservation in western Oklahoma (Wallace and Hoebel 1952). The land now identified as Fort Carson became part of the newly defined Territory of Colorado, enacted by Congress in 1861 (Athearn 1985:64).

Gold mining played an important role in the European development of the Fort Carson area, particularly after the 1848 finds in California, which encouraged miners to search in various places throughout Colorado. Both Cañon City and Pueblo served as supply centers for miners prospecting the Leadville lodes, but after 1863, the gold deposits there began to play out, and the two towns lost much of their importance (Zier et al. 1987:2-111). A silver rush in 1878 in the Wet Mountain Valley just outside Cañon City temporarily revived hopes of renewed mining wealth (Athearn 1985:120). A second gold strike in the Cripple Creek area in 1890 temporarily revitalized the industry, which led to renewed prospecting in the Fort Carson area, as well.

After the Civil War, population increased as the mining and agricultural potential of Colorado was realized, and as a result, various railroads were constructed throughout southern Colorado (Athearn 1985:89-110; Carrillo 1990:XVIII-21). Many local lines were built to transport coal mined from deposits east of Cañon City, and the last 15 years of the 19th century saw Florence's brief rise as an oil-drilling center (Zier et al. 1987:2-113). During this same period local stone-quarrying and cement-manufacturing plants were built in the general area, which included plants at Booth Gulch. Quarrying for building stone and clay was conducted at Stone City in Booth Gulch over a 10-to-15 year period. Clay mining was a viable operation at Booth Gulch and proved to be more long-lived than the quarrying of stone (Zier et al. 1987:2-115).

Cattle ranches, associated with the Santa Fe Trail, had been established in the area by the 1860s. The first herds were all longhorns brought in from Texas (Zier et al. 1987:2-119-120), although sheep were for a while the most important livestock (Zier et al. 1987:2-127). Settlement in the immediate Fort Carson area took the form of isolated ranches, with most of the area being used as open range (Zier et al. 1987:2-125). A list of the late 19th century ranches in the Fort Carson area is provided in Zier et al. (1987:2-128-133). Colorado Springs was established in 1871, and in that same decade freight and passenger services were established between Colorado Springs, Cañon City, and South Park (Athearn 1985:99).

The Fort Carson Military Reservation was established during the Second World War. Camp Carson was established in 1941, and Ent (later Peterson) Air Force Base was built a year later. Camp Carson was renamed Fort Carson in 1954, and in that same year both the United States Air Force Academy (USAF) and what would become NORAD were established (Zier et al. 1987:2-137-141).

CHAPTER 3

Review of Previous Archeological Work on the Fort Carson Military Reservation

At Fort Carson, archeological investigations generally parallel the evolution of 20th-century American archeology, from ill-trained, albeit enthusiastic, amateurs to the theoretically and methodologically sophisticated projects of today's researchers, both private- and university-based. *The Fort Carson Historic Preservation Plan* (HPP), compiled and edited by Zier et al. (1987: 1997), contains a detailed discussion of archeological investigations on the reservation and in surrounding areas. The following is, therefore, intended only as a brief synopsis of past archeological investigations in order to place current work into perspective.

The earliest known archeological work in the area of Fort Carson was conducted in the 1930s and 1940s by E.B. Renaud of the University of Denver (DU); his work is reported in several individual publications including the HPP (Zier et al. 1987). It was Renaud (1931b) who named the *Turkey Canyon District* and recognized its potential archeological importance. In this district, which is immediately east of Booth Mountain, Renaud identified several prehistoric campsites, some of them with structural remains (5PE60, 5PE63, 5PE649) as well as some rock art (5PE58) and rock shelters (5PE62). Renaud excavated at least one rock shelter site, 5PE62 (Renaud's Shelter), although it is unclear where the excavated materials were deposited (Zier et al. 1996:41). All of the above-mentioned sites were reevaluated by Fort Lewis College (FLC) during the summer of 1997 and are reported in Charles et al. (1999b).

During the 1930s, an amateur historian, C. W. Hurd (1960), incorrectly identified a site he thought was Bent's first fort in the Arkansas River Valley. Later excavations and documentary research suggest that this site (5PE64) is later than Bent's stockade, and it is also in the wrong place (Zier et al. 1996:41). The findings from testing suggest it is an early homestead (Andrew's Homestead) dating as early as the 1860s. The site is currently fenced and protected, and it was reevaluated by FLC (Charles et al. 1999b).

The University of Denver returned to the reservation in the 1960s and surveyed pieces of land along Red Creek, Turkey Creek, and Beaver Creek that were to be annexed by the U.S. Army (Withers 1964). A field crew from DU later excavated portions of the Avery Ranch site (5PE56) in 1965 and 1969 (Ireland 1968; Watts 1971, 1975). In that same decade, Bass and Cuzco (1963) reported on an aboriginal burial found by amateurs adjacent to Turkey Creek.

More amateur work was conducted by members of the Colorado Archeological Society (CAS) in the first part of the 1970s, which resulted in recording two rock art sites (5PE58 and 5PE163). One of these, 5PE58, had originally been located by Renaud (1930, 1931a) and rerecorded by Centennial Archaeology in 1988 (Van Ness et al. 1990). Both site locations were revisited by FLC over the course of the 1997 field season. As a result of the revisit, it was determined that 5PE163 was located incorrectly on the United States Geological Society 7.5' quadrangle map, and is the same site as 5PE58.

The appearance of the modern era of cultural resource management witnessed more intensive archeological investigations of the reservation. A 480-acre piece of land that straddled Renaud's original survey area was placed on the National Register in 1976 (5PE14) based on the significant rock art sites found within its boundaries. However, the district was not fully inventoried until 1988. Six sites within the district boundaries (5PE58, 5PE60, 5PE62, 5PE93, 5PE94, and 5PE926) were reevaluated in 1997 by FLC (Charles et al. 1999b). Of these, only 5PE58, 5PE62, and 5PE93 contain rock art.

Grand River Consultants (GRC) inventoried approximately one-third of the base between 1978 and 1982 and provided a comprehensive listing of all the different site types found in the FCMR (Alexander et al. 1982). A total of 38,291

acres was inventoried, resulting in the identification of 98 prehistoric and 51 historic sites. Of these, 35 sites were subsequently test excavated (Hartley et al. 1983). Almost half (41) of the total sites reevaluated by FLC in 1997 were recorded during this early inventory.

Other consultants who have contributed to the data base and knowledge of the reservation include Goodson and Associates (Burns and Killam 1983), Metcalf-Zier (Zier 1984), and Centennial Archaeology (CA). Most of the work in the past ten years has been conducted by Centennial Archaeology. This company conducted a cultural resource inventory of 1,900 acres and test excavated several sites in the Multi-Purpose Range complex (Zier and Kalasz 1985). They also inventoried 2,595 acres in Turkey Canyon (Van Ness et al. 1990), and 8,639 acres of high-site sensitivity areas in other parts of the FCMR (Jepson et al. 1992). In 1984 and 1985, portions of the Avery Ranch site were excavated by a field crew from Centennial Archaeology (Zier et al. 1988), and in 1986 the Recon John Shelter was partially excavated (Zier 1989). In addition to these inventories and excavations, Centennial Archaeology conducted test excavations at several other sites, and these are reported in Kalasz et al. (1993) and Van Ness et al. (1990). Both sites were reevaluated by FLC. Recon John shelter was determined to have significant intact remains and was recommended as eligible for nomination to the NRHP, while the Avery Ranch site, due to the extensive data recovery and the military impacts, is not recommended as eligible for nomination to the NRHP (Charles et al. 1999b).

Archeologists from Centennial Archaeology prepared a comprehensive *Historic Preservation Plan* for the future management of cultural resources on the reservation (Zier et al. 1987). Preliminary site-location models generated as part of the preservation plan were subsequently tested in the field by Grant and Zier (1987). Since the preparation and implementation of this plan, further work has been conducted under its authority. Centennial Archaeology was responsible for producing the Fort Carson Database system to simplify access for managers and researchers to archeological data on the reservation (Mueller 1995) and for implementing a curation notebook and artifact database (Mueller and McBride 1995).

Besides these large-scale surveys and excavations, smaller surveys have also been conducted: for example, those related to the construction of soil conservation structures, a fiber-optic line, and other small projects (Butler 1990, 1991, 1992). In 1993, Metcalf Archaeologists surveyed a small portion of land in the southeastern part of the FCMR for the City of Colorado Springs. No cultural resources were located (Spath 1993).

Including the present field project, FLC has conducted four field seasons in the FCMR; the results are reported in three other documents (Charles et al. 1997; Charles et al. 1999a; 1999b). During the summer of 1995 Fort Lewis College conducted an inventory of 1,460 acres of high-sensitivity parcels on Booth Mountain. Results confirmed that site density was high, with a total of 35 sites and 78 isolated finds. This figure of one site per 42 acres is something of a conundrum, considering the limitations of the landscape. Of the 35 sites recorded, the most common site type is the open, flaked-lithic artifact scatter lacking features.

The second field season by FLC (1996) was divided between inventory and testing (Charles et al. 1999a). Inventory was conducted on 850 acres in separate areas of the FCMR. The inventory resulted in the identification and recording of 27 cultural properties, which included 16 historic and prehistoric sites and 11 isolated finds. In that same year, evaluative testing was conducted at a large multi-component site near the Rod and Gun Club on the northwestern portion of the base. This site is a light surface scatter of prehistoric and historic artifacts and 24 stone features. Test units were excavated within four of the stone features with additional test units excavated across the site, but outside of the stone features. Testing resulted in the identification of buried, prehistoric cultural strata in two areas of the site. The surface structures were determined to be historic, mostly related to early military training operations. A charcoal sample from the buried component provided a calibrated radiocarbon AMS age of 570 ± 50 B.P. (Beta-104298: wood charcoal [Charles et al. 1999a:7.67]). There is a 95 percent probability that the calibrated age range falls between A.D. 1300 and A.D. 1435, which places the occupation during the Middle Ceramic period.

In 1997 FLC continued their cooperative agreement with MWAC and completed a site reevaluation project (Charles et al. 1999b). Eighty-nine cultural resources within the FCMR were reevaluated. These 89 cultural resources comprised historic and prehistoric archeological sites located within the numerous military training areas across the base. Many of the sites had never been fully recorded and were merely accounts, made by early researchers in the area, of

possible cultural resources. Attempts to locate the 89 cultural resources succeeded in accurately locating and identifying 76 (85%). Thirteen (15%) of the cultural resources were not relocated. The project resulted in 50 sites (56% of the resources evaluated) that have the potential to yield information significant to the prehistory of the FCMR, as defined in the Cultural Resource Management Plan for Fort Carson Military Reservation (Zier et al. 1997). The remaining 38 sites (44%), which include 13 sites which were not located, were recommended as not eligible for nomination to the NRHP.

A historic buildings inventory by MWAC (Barnes 1991) documented over 200 buildings of World War II vintage located close to or within the cantonment. Most recently, the Old Hospital Complex (5EP1778) at Fort Carson has been fully documented by the National Park Service (Connor and Schneck 1996). This semi-permanent complex was constructed during WWII and consists of 59 buildings that functioned as wards, clinics, mess halls, support service centers, and administrative, recreation, and utility structures.

In September of 1996, limited test excavations were conducted near the Mountain Post Sports Complex, located on the FCMR (Korgel 1996). A large vault packed with rusted metal was identified. The vault, believed to be part of a larger dump, was once associated with one of two historic ranch complexes. The report does not identify a specific time period for the artifacts, and the exact origin of the dump is inconclusive. No further work was recommended at this location. In that same month, test excavations were completed in the immediate area of Building 10010 of the proposed Turkey Creek National Register District. The purpose of the testing was to investigate the extent of impacts to any significant subsurface archeological deposits as a result of construction activities over the years. Subsurface testing was conducted in September 1996, and a report of the results was submitted to the National Park Service (Korgel 1996).

Most recently, R. Christopher Goodwin and Associates, Inc. published a combined ethnohistoric and ethnographic synthesis for the Fort Carson Military Reservation and Pinon Canyon Maneuver Site (Jones et al. 1998). The primary emphasis of this study was to determine which modern American Indian tribes may have ancestral ties to the two military facilities. A second concern of the report was to identify the range of traditional cultural properties present on these bases.

In conclusion, up to and including 1996, various investigations, conducted for different purposes and by different institutions, have resulted in a total of approximately half of the FCMR being inventoried (Zier et al. 1996). The recent work in the FCMR has produced at least two important reports published in refereed journals. In 1991, Zier and Kalasz published a synthetic site report of their excavations of the Recon John rock shelter in the *Plains Anthropologist*. A full report of their work is found in Zier (1989). This site is significant for the light it sheds on the transition between the Archaic and Woodland periods in this part of Colorado. Zier and a team of colleagues have also published in the same journal the results of testing at the Avery Ranch site, important for its information on subsistence and settlement patterns during the Apishapa phase (Zier et al. 1990). Watts (1971) had earlier produced a master's thesis (University of Denver) on this site. In 1985, a human burial (5PE773) was discovered in the southwest portion of the FCMR. This burial, which dates after 1000 B.P., was found by army personnel during training exercises. The results of the excavation of the burial are reported in *Southwestern Lore* (Butler et al. 1986).

CHAPTER 4

Research Design and Objectives

The federal legal criteria used in this evaluation are found in 36CFR60 and are as follows: the quality of significance in American history, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded or may be likely to yield information in prehistory or history.

Sites may have national, state, or local significance.

The *Colorado Plains Prehistoric Context* (Eighmy 1984: 48-49, 64-65, 77-78, 103, 142-143, 152-153) provides criteria for each of the major cultural periods represented on the Colorado Plains that further assist in the evaluation of a site's significance and potential eligibility for nomination to the National Register. Of lesser importance to the project area are the research problems identified for the mountains and foothills by the *Colorado Mountains Prehistoric Context* (Guthrie et al. 1984: passim) and the *Colorado Southern Frontier Historic Context* (Mehls and Carter 1984: passim).

This present work also conforms to the Historic Preservation Plan mandated for all Army installations under U. S. Army Regulation (AR) 420-40 (Department of Army 1984:2-1):

- 1) To integrate historic preservation requirements with the planning and conducting of military training, construction, other undertakings, and real property or land use decisions;
- 2) To set up a legally acceptable compliance procedure with the Advisory Council on Historic Preservation (ACHP) and the State Historic Preservation Officer (SHPO);
- 3) To set priorities for field, analytical, and documentation projects that are designed to develop, evaluate, and manage the inventory of significant historic properties;
- 4) To establish a procedure for evaluating historic properties;
- 5) To provide guidelines for the protection or treatment of historic properties; and
- 6) To identify funding, staffing, and milestones.

The FCMR Historic Preservation Plan (HPP) was prepared in 1987 (Zier et al. 1987) by Centennial Archaeology (Fort Collins, CO), Cultural Research and Management (Bismark, ND), Statistical Research (Tucson, AZ), and Kenneth Weber (Boulder, CO). This document provides a comprehensive synthesis of all cultural resources on the base, places these data into a regional context, and offers a detailed plan to ensure the army's compliance with its mandates regarding the correct treatment of cultural resources on army property. Specifically, the Fort Carson HPP "provides cultural resource managers with pertinent background about the prehistoric and historic resource base while outlining procedures for dealing

with the resources so that the requirements of applicable historic preservation statutes are fully met" (Zier et al. 1987: 1-2).

Most recently the HPP has been replaced by the Cultural Resources Management Plan (Zier et al. 1997). The purpose of the Cultural Resources Management Plan (CRMP) is to "identify and evaluate known cultural resources on the FCMR and to place these resources within their respective culture-historic context; to make predictions about the nature of undiscovered sites while providing criteria for their eventual evaluation; and to develop, on a priority basis, objectives and procedures for long-range management of resources that take into consideration both the goals and the day-to-day requirements of military training" (Zier et al. 1997:1-1).

Under the CRMP, six prehistoric site types and eight historical site types have thus far been identified on the FCMR. The prehistoric site types identified include: prehistoric open occupation hearth sites, prehistoric open sites lacking features, prehistoric open structure sites (alignments, enclosures, and wickiups), prehistoric sheltered sites, prehistoric rock art sites (petroglyphs and pictographs), and prehistoric human burial sites. Historic site types identified include the following: historical town sites, historical mining and quarrying-related sites, historical transportation network sites, historical homesteading/agriculture-related habitation sites, historical homesteading/agriculture-related non-habitation sites, historical human grave sites, and historical military-related sites. An eighth category includes unique historical sites such as historical rock art inscription, which do not easily fit into the previously mentioned site types.

As part of the CRMP for the FCMR, Zier et al. (1997) identified nine research themes that would be addressed through future archeological work on the base. These themes include: (1) chronology and cultural relationships, (2) settlement patterns, (3) the nature of prehistoric economics, (4) horticulture, (5) paleoclimates, (6) technology and material culture, (7) architecture, (8) rock art, and (9) geomorphology. Prehistoric sites that may yield information significant to the prehistory of the FCMR include: (1) Pre-Paleo Indian and Paleo Indian sites, (2) Early Archaic period sites, (3) sites with substantial *in situ* buried deposits, (4) stratified multi-component sites, (5) architectural Early and Middle Ceramic period sites, (6) Late Ceramic period (Protohistoric) structural sites, (7) communal kill sites, (8) intact rock art sites, (9) complex lithic material quarries, and (10) unique aboriginal sites (Zier et al. 1997: 11-110-112).

Prehistoric site types regarded as not significant and, therefore, generally ineligible for NRHP inclusion are isolated artifacts, isolated non-architectural features, artifact scatters restricted to the surface, sites damaged by natural or man-induced causes to the extent that physical integrity is limited, and rock art sites that are eroded or which exhibit only hypothesized tool-sharpening grooves (Zier et al. 1997: 11-112).

Research themes established for the historic period of Fort Carson include the following: homesteading and agricultural settlement, mining, and military occupation and training (Zier et al. 1997:11-94-100). Historical resources generally considered to be significant include: sites associated with the fur trade, early exploration, and pre-1880 military activities, open range ranching sites, original homestead or ranching structures, sites that contain unique or outstanding examples of architectural styles, periods, construction techniques, materials, or craftsmanship, homestead settlement sites, sites that exhibit historically important engineering features or industrial processes, and post-1942 military sites and structures. Sites generally recommended as not eligible for NRHP inclusion are isolated agricultural sites of the post-1900 period, settlement sites which retain poor integrity, and isolated artifacts (Zier et al. 1997:11-113-114).

EXPECTED RESULTS

It was expected that the inventory would yield a large number of cultural resources, including historic and prehistoric archeological sites, and isolated finds. In the past, it has been the experience of FLC's inventory results on the FCMR that there should be approximately equal to or greater numbers of isolated finds than archeological sites. It was also expected that high-site probability areas would yield more sites than the medium-site probability areas. A prefield search of inventory results since 1980 on the FCMR demonstrated that sites occur, on the average, every one hundred and seventeen acres. However, site densities range dramatically from a low of one site per two hundred fifty-six acres base-wide (Alexander et al. 1982), to a high of one site per twenty-seven acres in the Turkey Creek area (Van Ness et al. 1990). Given the data from the previous inventories, it was estimated that the current project would encounter, on the average, one site per seventy-five to one hundred acres.

High-site sensitivity areas, such as Rule and Orchard Canyons and Booth Mountain, were expected to yield the highest number of sites. Based on existing data on the FCMR, prehistoric sites are predominantly located on the mesa tops and in the wooded portions of the higher elevations of the base. Exceptions to this pattern exist, with some sites in and around the major drainages (Turkey Creek, Red Creek, and Beaver Creek) more common than sites in the lower grasslands. It was probable that rock art sites would be encountered, but the majority of rock art recorded from the FCMR is within Turkey Creek Canyon, which has been previously inventoried. Therefore, we did not expect to encounter considerable quantities of rock art sites. Given the inventory areas, which are not adjacent to the major drainages, the number of historic properties would be considerably less than the prehistoric properties. However, from previous experience on Booth Mountain (Charles et al. 1997), it was probable that historic transportation routes and historic juniper fences would be located in these areas.

The medium-site sensitivity areas were expected to yield site numbers less than the high-site sensitivity areas. The medium-site sensitivity areas in the low grasslands will not produce many archaeological sites. Most of the archaeological sites recorded in the medium-sensitivity areas will be in wooded, more dissected landscapes such as the area north and west of Red Creek.

CHAPTER 5

Field and Laboratory Methods

INTRODUCTION

The goal of the project was the archeological survey and inventory of up to 4,000 acres of high-site sensitivity areas as defined by Fort Carson Military Reservation and as much of the medium-site sensitivity areas as possible, up to 6,000 acres (Duke and Charles 1998), for a total of 10,000 acres. Specific locations of the high-site sensitivity areas were provided to FLC by Melissa Connor of MWAC. The areas were identified on a 1:50,000 base map of the FCMR. During the prefield work, Ron Marvin transferred the inventory areas to 1:24,000 quadrangle maps. Steve Chomko (DECAM) prioritized the medium-site sensitivity areas.

Field work was conducted in accordance with the existing guidelines and procedures established for the Pinon Canyon Maneuver Site (PCMS) by Dean (1992) and those of the State of Colorado Historic Preservation Office (SHPO). Current Colorado Cultural Resource Forms, as well as the appropriate forms documented in Appendix C of Dean (1992), were completed for each site. A scaled map was drawn for each site that included the datum, all collected artifacts, non-portable ground stone, and pertinent topographic and cultural features. A minimum of two black-and-white photographs were taken of each site. Site Reevaluation Forms were completed on two previously recorded sites in addition to completed Colorado Cultural Resource Forms.

The 1998 FLC field season at the FCMR was divided among two to three crews of three to four persons each. The field season began with three prefield days for the Project Director and Office Manager prior to the arrival of the Principal Investigator, the remainder of the crew chiefs, and the crew. The first full day for the crew commenced on July 15. The final field day for the 1998 project was October 18.

FIELD METHODS AND TECHNIQUES

Inventory

Given the difficult access to some of the training areas of the FCMR, a primary concern was to establish a schedule with Range Control for access to the various training areas. Thus, from the onset, plans for the field season were discussed with personnel at Range Control, which gave us greater flexibility in the planning process. Despite these preparatory arrangements, however, the third field session had to be shortened because of the military's closure of the inventory area. During most of September, the relevant areas were closed, and this pushed our last session into October.

Surface inventory was accomplished by pedestrian survey in 15-to-25 m transect intervals. The transects followed either a pre-established azimuth reading or, less commonly, contour intervals. Both methods were used to ensure adequate coverage of the different types of terrain. Transect surveys were preferred over contour surveys for the following reasons: dense vegetation and undulating terrain made following contours tedious and overly time-consuming, negotiating the terrain was a challenge even for the experienced field archeologists, and the limited experience of the students made surveying in contours less practical. Large survey areas were divided into smaller block units that were accessed from several locations, and inventoried from cardinal directions. This way the larger units were subdivided into more manageable units, and it was easier to predict ending and beginning points when connecting the smaller block units if they were inventoried in cardinal directions. To ensure complete coverage, the outer boundaries of each transect were flagged. On the return transect, the flagging tape was retrieved. The flagged line served as a marker for previously surveyed areas and also provided a starting point when returning to the area at a later time. Crew members on the end transects were responsible for maintaining the correct orientation. Transects that followed the contours were used primarily in steep canyons where this type of transect was necessitated. The survey members were spaced along the slope at 20 meter

intervals, and the contour elevation of each transect was maintained to the destination point.

Topographical features were used to break up the survey areas into manageable segments. Meadows, canyons, and drainages were all used as physical survey markers. United States Geological Survey quadrangle maps were used consistently in the field for orientation and for plotting archeological sites and isolated finds.

When an artifact or feature was discovered, intensive reconnaissance was conducted in the immediate area to define the extent of the resource. If more than four artifacts or one tool and one artifact were discovered within a twenty-meter area were discovered, the resource was defined as a site, following Dean (1992:IV-12).

A series of state site numbers for El Paso, Fremont, and Pueblo counties was issued to FLC by the SHPO's office prior to field work. A rebar datum with a stamped site tag was placed within each site. Each datum position was recorded with a Trimble Pathfinder Global Positioning System (GPS). Site boundaries were recorded with the GPS as well. Temporary GPS files were downloaded in the field with a laptop computer, and the post-processing was accomplished in the laboratory at FLC. A hand-held Precision Lightweight GPS Receiver (PLGR), courtesy of MWAC, was operated by Ron Marvin of MWAC, and this gave us accurate Universal TransMercator readings while in the field to enable us to check our topographic plots.

Safety

The FCMR is an active military installation where training activities take place simultaneously in separate training areas. These training activities commonly include "live fire"; therefore, safety regulations for the base were rigorously followed. The crew was briefed on these safety regulations by the Project Director and the Field Director, which included an awareness of military activities and of natural dangers such as rattlesnakes. Randy Korgel and Steve Chomko arranged a brief training session with the Army on the recognition and safety precautions of unexploded ordnance.

Each morning a telephone call was placed to the Range Control Office, which instructed us in the proposed daily activities scheduled in the FCMR. Vehicle range passes were obtained each morning from Range Control. When any training area was active, field work was confined to those training areas that were inactive and safe. An additional cautionary procedure consisted of checking in at the Multi-Purpose Range Complex and the Air Force installations before entering these training areas.

Communication between field crews was important. Each crew carried a Benedix two-way radio provided by the FCMR. These radios were left on while in the field. Radio communication between crews greatly improved survey logistics. The radios also provided a way to contact base personnel if needed. A cellular phone was carried in case of an emergency.

Shovel Test and Trowel Probe

Shovel tests and trowel probes to determine the depth of soils/sediments, and thus the potential for buried cultural deposits, were made on a few sites. Shovel test information, such as diameter, depth, materials recovered, and a brief stratigraphic description, were recorded on auger/shovel test forms. The locations of these tests were placed on the site map, and all artifacts recovered during subsurface explorations were collected and analyzed in the laboratory.

RECORDING

Archeological Site and Isolated Find

Definitions for archeological and historical sites and for isolated finds followed those of Dean (1992). A *prehistoric archeological site* is a locus of five or more unmodified flakes or a single tool associated with one or more unmodified flakes distributed so that no artifact is more than 20 meters from the next nearest artifact. Any prehistoric feature or prehistoric rock art, whether or not it is associated with artifacts, or any prehistoric evidence occurring in the context that suggests high

potential for buried cultural materials, is also defined as a site (Dean 1992:IV-12).

A *historic archeological site* is any location that contains material evidence attributable to general Euro-American ideology and manufacture. These include isolated architectural features, historic features, or historic rock art. Implied in Dean (1992), although never explicitly stated, is the criterion that the site must be at least 50 years old to be considered a historic site. Therefore, any locality, feature, or artifact, where its lack of antiquity is not immediately apparent, is recorded as a site. This must be done with a great deal of caution, especially within the military reservation where routine army ground maneuvers leave physical remains that resemble historic features, but where little debris remains to conclusively identify its cultural origin (See Charles et al. [1999a] for a discussion of testing results on historic military features). Features or structures lacking visible artifacts but that are presumed to be prehistoric or historic (> 50 years old) are recorded as a site.

A *prehistoric isolated find* is defined as less than five unmodified flakes or a single tool, each of which is separated from the nearest other artifact by no less than twenty meters (Dean 1992:IV-12).

A *historic isolated find* is any locality exhibiting four or fewer artifacts (Dean 1992:IV-12). Exceptions to this definition include single artifacts broken into multiple pieces such as a bottle.

Datum A rebar datum was placed at every archeological site. The Smithsonian site number was stamped into a metal site tag and attached to the datum.

A Precision Lightweight GPS Receiver (PLGR) was used both to provide field plots of sites and isolated finds, and to aid in navigation. The PLGR was extremely valuable for inventory of the Mount Pittsburg United States Geological Survey 7.5' quadrangle map, since the contours on this quadrangle are 40 ft apart.

Two Trimble Pathfinder Global Positioning Systems (GPS) were employed during the survey. For accurate coordinate readings, the GPS units needed to receive signals from a minimum of four satellites, although five were preferable. One hundred data points were recorded at the datum of each site, and fifty points at each isolated find. GPS positions were taken along the boundaries as well. At the end of each day, the data were downloaded from the GPS unit into portable computers supplied by FLC and MWAC.

The coordinate readings from the GPS are issued as UTM readings in meters. The UTM readings obtained from the GPS units are a priori scrambled, but were corrected during post-processing at FLC. FLC supplied Vince Schiavitti (DECAM) with zip disks and with the dates and times of field work. The zip disks, with the base file data, were returned to FLC where they were post-processed. Eventually diskettes containing the post-processed, corrected UTM locations filed in Paradox 7 were returned to Vince Schiavitti at DECAM.

Site Forms and Site Maps Colorado State Cultural Resource Forms were completed on all 91 cultural resources, which included the two previously recorded sites. Other forms completed included Cultural Resource Management Prehistoric Component and Historic Component Forms, and Rock Art Panel Forms, and Reevaluation Forms. Besides the Colorado State forms, Fort Carson/Pinon Canyon forms were completed as necessary.

Site maps were created using azimuth readings taken with either a Brunton or Silva Ranger compass, and distances were measured with metric tapes. Field maps were drawn to scale on metric graph paper. Cultural features, artifact clusters, and natural topographic features were included on the site maps. On small sites, all artifacts were point-plotted, and on larger sites temporally diagnostic artifacts and tools (flaked- and ground-stone) were plotted individually.

Photographs At least two black-and-white photographs were taken of each site. An overview of the site was taken along with a panoramic overview, usually taken from the site datum. Whenever possible, at least one of the photographs included a view of topographic features that would help in relocating the site. Additional photographs were taken of features and of rock art.

ARTIFACT ANALYSIS

Flaked-lithic Debitage

Flaked-lithic analysis of debitage was conducted in the field. On sites with less than 150 pieces of flaking debris, the entire surface assemblage was analyzed. Sites with greater than 150 pieces of flaking debitage were non-randomly sampled, and a minimum of 150 flakes or shatter was analyzed. Analysis followed the classification system developed by Ahler (1997) for the PCMS. To be consistent with previous flaked-lithic analyses at the FCMR, debitage was also categorized under the Sullivan and Rosen (1985) classification system. Data on the flaked-lithic debitage were recorded in paper form and collected in Sharp Palmtop portable computers, which were downloaded each night into the laptop computer.

Material types, based on Ahler (1997), identified in our sample include: chalcedony, chert, orthoquartzite, quartzite, silicified wood, basalt/hornfels, and siltstone.

Four categories of flaking debris were recognized, in accordance with Ahler (1997): shatter, simple flake, complex flake, and bifacial thinning flake. A fifth category, the bipolar flake, was not present in our study. These flake types, as they are defined by Ahler (1997), are presented below.

Shatter A generally angular piece of flaked and flakeable stone which lacks any feature which will allow determination of dorsal or ventral surfaces or any determination of direction of force reduction.

Simple Flake A freehand percussion or pressure flake which exhibits parts of no more than two previous flake scar facets on the dorsal surface (exclusive of small platform trimming/shaping flakes). May or may not retain the platform.

Complex Flake A freehand percussion or pressure flake which lacks the specialized features of a bifacial thinning flake but which does retain all or parts of three or more previous scar facets on the dorsal surface (exclusive of small platform trimming/shaping flakes). May or may not retain the platform.

Bifacial-thinning Flake A technologically specialized flake removed from a biface during mid to late stages of thinning. Retains a combination of most of the following attributes: a platform which is a fragment of a bifacial margin (linear and faceted), lipped platform, flat, very thin cross-section (transverse and longitudinal), feathered, low-angle lateral margins and termination, slight curvature in longitudinal section, multiple dorsal scars, dorsal scars with converge from different directions, little or no cortex.

Size-grades used in this project differed slightly from those of Ahler (1997). Flakes were size-graded with the aid of two small hand screens ($\frac{1}{2}$ " and $\frac{1}{4}$ "). Flakes greater than $\frac{1}{2}$ " were classified as Grade 1, flakes greater than $\frac{1}{4}$ " and less than $\frac{1}{2}$ " were classified as Grade 2, and flakes smaller than $\frac{1}{4}$ " were classified as Grade 3. Grade 3 was added to enable classification of very small flakes. Presence or absence of cortex was recorded as well.

The presence or absence of cortex, size-grade, and flake type are used to infer stages of reduction, i.e., core reduction to final stages of tool production. It is assumed that higher percentages of simple flakes occur during the early to middle stages of core reduction; complex flakes occur during middle stages of reduction, the first half of shaping and tool production; but are more common in latter stages of reduction, the last half of shaping and tool production of unifacial and bifacial tools. These basic premises are in part based on experimental data reported by Magne (1985). Experimental studies by Ahler (1989) on samples of Knife River Flint suggest that bifacial thinning flakes are associated with later stages of bifacial reduction, but are rare or absent in other technologies and reduction stages (Ahler and Smail 1999). Variability of raw material types at the FCMR and those from the above-mentioned studies may produce inconsistencies, which could result in minor incompatibilities between data sets.

Additionally, flaked lithic artifacts were categorized using the method developed by Sullivan and Rosen (1985). This method is consistent with the analysis of lithic artifacts from the Recon John Shelter in Turkey Creek (Zier 1989) and

from other inventories (Charles et al. 1997; Charles et al. 1999a; 1999b; Kalasz et al. 1993; Zier et al. 1996). In this classification system, debitage is sorted into four categories by means of a simple key of dichotomous technological attributes (Sullivan and Rosen 1985:759). This approach to debitage analysis is designed to describe distinctive assemblages of artifacts rather than the more traditional analysis, which describes assemblages of distinctive artifacts. Furthermore, Sullivan and Rosen (1985) argue that most debitage analysis is based on the assumption that technological origins can be identified from key attributes alone, when, in fact, the technological origins of most artifacts cannot be individually determined because reduction often proceeds as a continuum rather than as a sequence of discrete stages.

In the Sullivan and Rosen classification system, the lithic debitage is separated into four categories: debris, flake fragments, broken flakes, and complete flakes. Complete flakes are separated from all other debitage on the basis of the following characteristics: single interior surface, striking platform (point of applied force or impact), and intact margins. A single interior surface is indicated by ripple marks, force lines, or a bulb of percussion. A point of applied force is indicated by an intact striking platform or by the origin of force line radiation where only fragmentary striking platform remains. Margins are intact if the distal end exhibits a hinge or feather termination, or if snap breaks do not interfere with accurate width measurements. The length of a complete flake is measured as the maximum length of the flake from the point of impact to the point where a 90° line intersects the bottom of the flake. The width is described as the maximum width of the flake perpendicular to the percussion axis.

Under the Sullivan and Rosen (1985) classification system, the relative frequencies of flake types represented at the sites are used to infer stages of lithic technology, e.g. core reduction and/or tool manufacture. Under this classification system, it is implied that complete flakes and debris indicate stages of core reduction, while broken and flake fragments represent the byproducts of tool manufacture.

For comparative purposes, we constructed tables that included both classification systems. Generalizations concerning stages of reduction and tool manufacture were completed for sites with less than 100 flakes. The small number of flakes from several sites limited further interpretation. Eleven sites had a sufficient number of flakes to warrant more intensive analysis and interpretation. On these sites, we constructed tables by size-grade in addition to the previously described debitage tables, and ran chi-square tests for significance.

Ground Stone

Previously unrecorded ground stone artifacts were recorded on PCMS/Fort Carson non-portable ground stone forms.

LABORATORY METHODS AND TECHNIQUES

Laboratory methods for the project followed those prescribed in the PCMS manual (Dean 1992). These specifications were rigorously followed throughout the laboratory analysis. All artifacts were washed, recorded, cataloged, and rebagged. Charcoal was collected from two hearth features, and these were the only special samples collected over the course of the project. These samples were sent to Beta Analytic for radiocarbon dating. FLC analyzed the flaked-lithic artifacts, historic artifacts, and non-human faunal remains.

Flaked-lithic Artifacts

Analysis of the collected flaked-lithic artifacts from the 1998 field season was conducted under the guidelines set forth by Dean (1992) and by Ahler (1997). Flaked-lithic artifacts were divided into the following categories: bifaces, flake tools, cores, complete flakes, and broken debitage. Additionally, the flake tools were further separated into patterned and unpatterned flake tools (Ahler 1997). Flaked-lithic artifacts other than tools were as a rule not collected; however, a few pieces of debitage were recovered from shovel tests and trowel probes, and these artifacts were, therefore, collected and classified.

Raw material classification was based on Ahler (1997). Measurements were taken from the maximum length,

width, and thickness whenever possible; weight was measured on complete specimens only. Descriptive terms concerning morphological attributes for bifaces were taken from Lintz and Anderson (1989). Haft measurements, such as neck width, neck height, haft length, and base width were measured when possible regardless of whether or not the haft element was complete. The artifacts were cataloged, and attribute analysis was recorded on the appropriate PCMS/Fort Carson forms.

Projectile Points The collected projectile points were compared to Fulgham and Anderson (1984) and Lintz and Anderson (1989) for the Fort Carson/PCMS analyses. Additionally, reports from the FCMR were used for comparison. These include Alexander et al. (1982), Charles et al. (1997; Charles et al. 1999a; 1999b), Hartley et al. (1983), Jepson et al. (1992), Kalasz et al. (1993), Van Ness et al. (1990), Zier and Kalasz (1985), and Zier et al. (1996). As needed for specific information, the following sources were also consulted: Bell (1958), Gunnerson (1989), Irwin-Williams and Irwin (1966), and Perino (1971).

Diagnostic attributes, including overall size and hafting morphology (stemmed or flanged, base shape, tang, and shoulder characteristics), provided a visual comparison to determine similarities among projectile point types. As with all nonstatistical projectile point comparisons, the results are somewhat subjective. Based on morphological similarities with projectile points from dated contexts, relative dates were assigned to the points whenever possible. All projectile points from each site were examined to establish a base-line date for that site. Other data were used to assess site dates, such as the presence of ceramics, ground stone, and structures.

Debitage A few pieces of flaking debris were collected from shovel tests. These artifacts were classified by thedebitage systems described in the laboratory methods and techniques section of this report.

Prehistoric Ceramic Artifacts

No prehistoric ceramic artifacts were recovered during the 1998 field session.

Historic Artifacts

Historic artifacts were classified and coded using the standard required by the PCMS (Dean 1992). Sources used to describe and date these artifacts include Fike (1987), Kovel and Kovel (1986), Lorrain (1968), Putnam (1965), and Toulouse (1971).

Faunal Remains

Faunal material was analyzed by FLC students using the comparative collection housed in the Department of Anthropology of the College. Due to the small size of much of the bone, identification of individual species was not possible.

Cataloging

Procedures for cataloging artifacts for Fort Carson/PCMS are specified in two manuals: *Fort Carson Curation Notebook and Artifact Database Documentation* (Mueller and McBride 1995), and *Guidelines to Required Procedures for Archeological Field and Laboratory Work at Pinon Canyon Maneuver Site, Las Animas County, Colorado* (Dean 1992). The two procedures are noticeably different, and their respective databases are not comparable. At this time, solutions are currently under review to correct the disparity in catalog systems. In the meantime, the catalog system developed by Mueller and McBride (1995) for the Fort Carson Military Reservation catalog system was used throughout this project.

Database

Artifact data collected on PCMS forms was entered into Paradox 7 and Microsoft Access. This information will be available to the FCMR and the Army in electronic and hard copy versions.

Chapter 6

Inventory Results

INTRODUCTION

The total number of acres inventoried during this project is 7,236.03, which includes portions or all of 42 predefined areas (Table 1.1, Figure 1.2) over the FCMR, but they are concentrated in its southwest and south-central portions. The land that was inventoried lie in three counties: El Paso, Fremont, and Pueblo; and it is located on six United States Geologic Survey 7.5' topographic maps: Cheyenne Mountain, Fountain, Pierce Gulch, Mount Pittsburg, Stone City, and Timber Mountain. Of the total acreage, 4,035.66 are high-site sensitivity areas and 3,200.37 are medium-site sensitivity areas.

A total of 91 cultural resources were recorded (Table 6.1) during the project, including two previously recorded sites (5PE334 and 5PE625), that were revisited and reevaluated. Twenty-three of these sites are recommended as eligible for nomination to the NRHP, while the remaining sixty-eight are recommended as not eligible for nomination to the NRHP. Sites determined as having the potential to yield significant information on the prehistory of the FCMR are addressed individually under management recommendations in Chapter 8. Eighty-six isolated finds were recorded as well (Table 6.2). The isolated finds are primarily of prehistoric origin and include flakes, flaking debris, and occasionally tools (Table 6.2). Isolated finds are not eligible for nomination to the NRHP; therefore, no further work is recommended at these locations.

Summary descriptions for the individual sites are provided in Appendix III. These descriptions are arranged in sequential order and by county. They are general and include variables such as the geomorphic context, artifact descriptions, flaked-lithic debitage tables, site maps, and eligibility and management recommendations.

The focus of the remainder of this chapter is to present summary data which we believe may be important to explaining the nature of archeological resources at the FCMR. This current inventory of over 7,000 acres is one of three large (>4,000 acres) inventories conducted since the initial inventory during the early 1970s, and we believe that the results from the current inventory shed light on settlement patterns at the base. Elementary statistics are used to create tables and charts that allow generalizations, such as site density, distance to water, aspect and so forth, to be made about the archeological resources from the inventory. For a variety of reasons, we have not included statistical data beyond the basics, nor is the following discussion intended to support or refute the site-sensitivity model developed by Zier et al. (1987) for the FCMR.

It should be pointed out that we follow Clarke (1968:32) in viewing models as "hypotheses or sets of hypotheses which simplify complex observations while offering a largely accurate predictive framework structuring these observations...". Zier et al.'s (1987) model was "inductively" generated from a block sample of areas on the FCMR; therefore, his model should properly be viewed as a preliminary, albeit important, conceptualization of past settlement patterns that needs to be tested, verified, and refined in the light of emerging data.

RESULTS

Using discriminant analysis and other statistical formulas, Zier et al. (1987) developed a cultural resource-sensitivity model that divided the base into areas of high, medium, and low site sensitivity (Zier et al. 1987:2-90). This model provided the basis for the sensitivity areas inventoried by FLC. According to Zier et al. (1987:2-89), general guidelines for site sensitivity the following: areas within 250 meters of major watercourses are regarded as highly sensitive; scrub-covered or timbered uplands (mesas, ridges, broken hills) are of medium sensitivity; and open grasslands and parks are of low sensitivity. It is not explicit what high, medium, and low site sensitivity means in terms of how many sites there per unit, or whether this be an acre, a grid, etc. Another point that we should make is that the data in the model required both site and non-site locations, and the site locations were primarily obtained from the systematic sample inventory conducted by Grand

Table 6.1. Archeological Resources Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Site Number	County	Quadrangle	Site Type	Eligibility Recommendation
5EP2904	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2905	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2906	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2907	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2908	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2909	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2910	El Paso	Timber Mountain	Historical homesteading/agricultural-related habitation site	N
5EP2911	El Paso	Timber Mountain	Prehistoric sheltered site	Y
5EP2912	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2913	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2914	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2915	El Paso	Timber Mountain	Prehistoric open occupational hearth site	Y
5EP2916	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2917	El Paso	Timber Mountain	Prehistoric open site lacking features	Y
5EP2918	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2919	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2920	El Paso	Timber Mountain	Prehistoric open site lacking features	Y
5EP2921	El Paso	Timber Mountain	Historical homesteading/agriculture-related habitation site	Y

Site Number	County	Quadrangle	Site Type	Eligibility Recommendation
5EP2922	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2923	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2924	El Paso	Timber Mountain	Prehistoric open site lacking features	Y
5EP2925	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5EP2926	El Paso	Timber Mountain	Prehistoric open site lacking features	N
5FN1578	Fremont	Mount Pittsburg	Prehistoric open site lacking features	Y
5FN1579	Fremont	Mount Pittsburg	Prehistoric sheltered site	N
5FN1580	Fremont	Pierce Gulch	Prehistoric open site lacking features	N
5FN1581	Fremont	Pierce Gulch	Prehistoric open site lacking features	N
5FN1582	Fremont	Pierce Gulch	Prehistoric open site lacking features	Y
5FN1583	Fremont	Pierce Gulch	Prehistoric open site lacking features	N
5FN1584	Fremont	Pierce Gulch	Prehistoric open site lacking features	N
5FN1585	Fremont	Pierce Gulch	Prehistoric open site lacking features	N
5FN1586	Fremont	Pierce Gulch	Prehistoric open site lacking features	N
5FN1587	Fremont	Pierce Gulch	Historical transportation network	N
5FN1588	Fremont	Pierce Gulch	Prehistoric open site lacking features	Y
5FN1589	Fremont	Mount Pittsburg	Prehistoric open site lacking features	N
5FN1590	Fremont	Pierce Gulch	Historical homesteading/agriculture-related non-habitation site	N
5FN1591	Fremont	Mount Pittsburg	Prehistoric open site lacking features	N
5FN1592	Fremont	Mount Pittsburg	Prehistoric sheltered site, prehistoric rock art	Y

Site Number	County	Quadrangle	Site Type	Eligibility Recommendation
5FN1593	Fremont	Pierce Gulch	Historical homestead/agriculture-related non-habitation site and prehistoric open site lacking features	N
5FN1594	Fremont	Pierce Gulch	Historical mining and quarry-related site	N
5FN1595	Fremont	Mount Pittsburg	Prehistoric open site lacking features	N
5FN1596	Fremont	Mount Pittsburg	Prehistoric open site lacking features	N
5FN1597	Fremont	Mount Pittsburg	Prehistoric open site lacking features	N
5FN1601	Fremont	Mount Pittsburg	Prehistoric open site lacking features	N
*5PE344	Pueblo	Stone City	Historical homesteading/agricultural-related habitation and human grave site	N
*5PE625	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	N
5PE2940	Pueblo	Timber Mountain	Prehistoric open structural site	Y
5PE2941	Pueblo	Pierce Gulch	Prehistoric open occupation hearth site	Y
5PE2942	Pueblo	Pierce Gulch	Historical homestead/agriculture-related non-habitation site	N
5PE2943	Pueblo	Pierce Gulch	Historical homestead/agriculture-related non-habitation site	N
5PE2944	Pueblo	Pierce Gulch	Prehistoric open site lacking features	N
5PE2945	Pueblo	Timber Mountain	Prehistoric open site lacking features	N
5PE2946	Pueblo	Timber Mountain	Prehistoric open site lacking features	N
5PE2947	Pueblo	Timber Mountain	Prehistoric open site lacking features	N
5PE2948	Pueblo	Pierce Gulch	Historical homestead/agriculture-related non-habitation site	N
5PE2949	Pueblo	Timber Mountain	Prehistoric open site lacking features	N
5PE2950	Pueblo	Pierce Gulch	Prehistoric open site lacking features	N

Site Number	County	Quadrangle	Site Type	Eligibility Recommendation
5PE2951	Pueblo	Pierce Gulch	Historical mining and quarrying-related and homesteading/agriculture-related habitation site	N
5PE2952	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	N
5PE2953	Pueblo	Stone City	Prehistoric open site lacking features	N
5PE2954	Pueblo	Stone City	Prehistoric open site lacking features	Y
5PE2955	Pueblo	Stone City	Prehistoric open site lacking features	N
5PE2956	Pueblo	Pierce Gulch	Historical transportation network, prehistoric open site lacking features	N
5PE2957	Pueblo	Pierce Gulch	Prehistoric open site lacking features	N
5PE2958	Pueblo	Pierce Gulch	Prehistoric sheltered site	Y
5PE2959	Pueblo	Pierce Gulch	Historical homestead/agriculture-related non-habitation site	N
5PE2960	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	N
5PE2961	Pueblo	Mount Pittsburg	Historical human grave site	N
5PE2962	Pueblo	Stone City	Prehistoric open site lacking features	N
5PE2963	Pueblo	Stone City	Prehistoric sheltered site	Y
5PE2964	Pueblo	Stone City	Prehistoric open structural site	Y
5PE2965	Pueblo	Stone City	Prehistoric open site lacking features	N
5PE2966	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	Y
5PE2967	Pueblo	Mount Pittsburg	Prehistoric sheltered site	Y
5PE2968	Pueblo	Pierce Gulch	Prehistoric open occupation hearth site	Y
5PE2969	Pueblo	Mount Pittsburg	Prehistoric sheltered site	Y

Site Number	County	Quadrangle	Site Type	Eligibility Recommendation
5PE2970	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	N
5PE2971	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	N
5PE2972	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	Y
5PE2973	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	N
5PE2974	Pueblo	Pierce Gulch	Prehistoric open site lacking features	N
5PE2975	Pueblo	Pierce Gulch	Prehistoric open site lacking features	N
5PE2977	Pueblo	Mount Pittsburg	Prehistoric open site lacking features	N
5PE2978	Pueblo	Mount Pittsburg	Prehistoric sheltered site	Y
5PE2979	Pueblo	Stone City	Prehistoric open site lacking features	N
5PE2980	Pueblo	Stone City	Prehistoric open site lacking features	N
5PE2981	Pueblo	Pierce Gulch/ Stone City	Historical homestead/agriculture-related non-habitation site	N
5PE2982	Pueblo	Pierce Gulch	Historical homestead/agriculture-related non-habitation site	N
5PE2983	Pueblo	Pierce Gulch	Historical homestead/agriculture-related non-habitation site	N
5PE2984	Pueblo	Stone City	Prehistoric sheltered site	Y
5PE2985	Pueblo	Pierce Gulch	Prehistoric open site lacking features	N

*sites reevaluated during the 1998 inventory

Table 6.2. Isolated Finds Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

State Number	County	Quadrangle	Description
5EP2927	El Paso	Timber Mountain	1 complete complex chert flake
5EP2928	El Paso	Timber Mountain	1 complete complex chert flake 1 broken complex chert flake 1 shatter
5EP2929	El Paso	Timber Mountain	1 complete complex quartzite flake
5EP2930	El Paso	Timber Mountain	1 complete complex silicified wood flake
5PE2931	El Paso	Timber Mountain	1 complete complex chert flake
5EP2932	El Paso	Timber Mountain	1 complete complex chert flake
5EP2933	El Paso	Timber Mountain	1 broken complex obsidian flake 1 complete complex obsidian flake
5EP2934	El Paso	Timber Mountain	1 complete complex quartzite flake
5EP2935	El Paso	Timber Mountain	1 complete complex, chert flake 1 chert shatter
5EP2936	El Paso	Timber Mountain	2 complete simple quartzite flakes 1 complete complex quartzite flake 1 broken simple chert flake
5EP2937	El Paso	Timber Mountain	1 broken complex chert flake
5EP2938	El Paso	Timber Mountain	1 complete complex quartzite flake 1 complete complex quartzite flake
5EP2939	El Paso	Timber Mountain	1 complete, complex chert flake
5PE2940	El Paso	Timber Mountain	3 chert shatter
5EP2941	El Paso	Timber Mountain	2 broken complex chert flakes 1 fragment of a simple chert flake 1 chert shatter
5EP2942	El Paso	Timber Mountain	1 mid-section of a chert biface 1 complete simple chert flake 1 complete complex chert flake
5EP2943	El Paso	Timber Mountain	1 complete simple chert flake 1 broken simple chert flake 1 simple complete chert flake
5EP2944	El Paso	Timber Mountain	1 complete complex chert flake
5EP2945	El Paso	Timber Mountain	1 fragment of a complex chert flake
5EP2946	El Paso	Timber Mountain	1 complete complex chert flake

State Number	County	Quadrangle	Description
5EP2947	El Paso	Timber Mountain	1 broken simple chert flake
5EP2948	El Paso	Timber Mountain	1 simple broken quartzite flake
5EP2949	El Paso	Timber Mountain	1 piece of quartzite shatter
5EP2950	El Paso	Timber Mountain	1 fragment of a complex, quartzite flake 1 piece of chert shatter
5EP2951	El Paso	Timber Mountain	1 complete complex chert flake 1 complete complex quartzite flake 1 complete complex quartzite flake
5EP2952	El Paso	Timber Mountain	1 broken simple chalcedony flake 1 broken complex silicified wood flake
5EP2953	El Paso	Timber Mountain	1 complete complex quartzite flake
5EP2954	El Paso	Mount Pittsburg	1 complex broken chert flake
5EP2955	El Paso	Timber Mountain	2 broken simple orthoquartzite flakes
5FN1598	Fremont	Mount Pittsburg	1 broken complex chert flake 1 fragment of a complex silicified wood flake
5FN1599	Fremont	Mount Pittsburg	1 chert biface
5FN1600	Fremont	Mount Pittsburg	1 silicified wood biface
5FN1602	Fremont	Mount Pittsburg	1 fragment of a simple, orthoquartzite flake
5FN1603	Fremont	Pierce Gulch	1 sandstone mano
5FN1604	Fremont	Pierce Gulch	1 patterned biface tip
5FN1605	Fremont	Pierce Gulch	1 complex chert flake
5FN1606	Fremont	Pierce Gulch	1 fragment of solarized glass
5FN1607	Fremont	Mount Pittsburg	1 broken complex chert flake
5FN1608	Fremont	Mount Pittsburg	1 sandstone mano
5FN1609	Fremont	Mount Pittsburg	1 broken complex chert flake
5FN1610	Fremont	Mount Pittsburg	1 fragment of a complex, chert flake 1 broken simple orthoquartzite flake
5FN1611	Fremont	Pierce Gulch	1 broken complex chert flake
5FN1612	Fremont	Pierce Gulch	1 chert projectile point
5FN1613	Fremont	Pierce Gulch	1 patterned biface
5FN1614	Fremont	Pierce Gulch	6 fragments of solarized glass (same bottle)

State Number	County	Quadrangle	Description
5FN1615	Fremont	Pierce Gulch	1 utilized chert flake
5PE2976	Pueblo	Pierce Gulch	1 chert biface fragment
5PE2986	Pueblo	Pierce Gulch	1 fragment of a complex chert flake
5PE2987	Pueblo	Timber Mountain	1 utilized chert flake
5PE2988	Pueblo	Timber Mountain	2 simple chert flakes 1 simple orthoquartzite flake 1 possible orthoquartzite core
5PE2989	Pueblo	Pierce Gulch	1 broken simple orthoquartzite flake
5PE2990	Pueblo	Pierce Gulch	1 broken complex chert flake 1 piece of chert shatter 1 complete complex orthoquartzite flake
5PE2991	Pueblo	Pierce Gulch	1 broken complex chert flake
5PE2992	Pueblo	Pierce Gulch	1 complete complex chert flake
5PE2993	Pueblo	Pierce Gulch	1 complete simple chert flake
5PE2994	Pueblo	Pierce Gulch	1 piece of chert shatter
5PE2995	Pueblo	Mount Pittsburg	1 complete simple chert flake 1 fragment of a simple chert flake 1 piece of chert shatter
5PE2996	Pueblo	Mount Pittsburg	1 broken simple chert flake 1 complete complex chert flake 1 complete complex quartzite flake 1 complete simple chert flake
5PE2997	Pueblo	Stone City	1 broken simple chert flake
5PE2998	Pueblo	Stone City	1 broken simple chalcedony flake
5PE2999	Pueblo	Mount Pittsburg	1 complete simple chert flake
5PE3000	Pueblo	Mount Pittsburg	1 utilized chert flake
5PE3001	Pueblo	Mount Pittsburg	1 broken simple chalcedony flake 1 piece of argillite shatter
5PE3002	Pueblo	Stone City	1 sandstone metate fragment
5PE3003	Pueblo	Stone City	1 chert biface
5PE3004	Pueblo	Stone City	1 complete sandstone mano
5PE3005	Pueblo	Pierce Gulch	1 fragment of a rhyolite mano
5PE3006	Pueblo	Timber Mountain	1 broken simple quartzite flake

State Number	County	Quadrangle	Description
5PE3007	Pueblo	Pierce Gulch	1 igneous maul
5PE3008	Pueblo	Mount Pittsburg	1 complete simple chalcedony flake 3 complete complex chalcedony flakes
5PE3009	Pueblo	Pierce Gulch	1 complete complex silicified wood flake
5PE3010	Pueblo	Pierce Gulch	1 chert projectile point
5PE3011	Pueblo	Pierce Gulch	1 complete complex silicified wood flake
5PE3012	Pueblo	Pierce Gulch	1 patterned chert tool
5PE3013	Pueblo	Pierce Gulch	1 complete simple chert flake
5PE3014	Pueblo	Timber Mountain	1 complete flake with cortical platform 1 fragment of a chalcedony flake
5PE3015	Pueblo	Mount Pittsburg	1 broken complex chalcedony flake
5PE3016	Pueblo	Pierce Gulch	1 broken simple chert flake
5PE3017	Pueblo	Pierce Gulch	1 broken complex chert flake
5PE3018	Pueblo	Pierce Gulch	1 complete complex chert flake
5PE3019	Pueblo	Timber Mountain	1 unfinished patterned chalcedony biface
5PE3020	Pueblo	Stone City	1 fragment of a simple chert flake
5PE3021	Pueblo	Timber Mountain	1 chert core fragment
5PE3022	Pueblo	Timber Mountain	1 fragment of a simple chalcedony flake
5PE3023	Pueblo	Mount Pittsburg	1 complete chalcedony flake
5PE3024	Pueblo	Pierce Gulch	1 sandstone slab metate

River Institute (GRI) between 1978 and 1980 (Alexander et al. 1982). This survey of 38,291 acres or approximately one-third of the FCMR located 149 sites or one site per 257 acres, which is a much lower density than most recent inventories. One reason for this disparity may be the differences in environmental coverage. The systematic sample inventory included portions of all environmental zones, while later surveys have been more selective in their coverage. Another source of discrepancy may lie in criteria used to define a site. The set of criteria currently in use was defined in the *Guidelines to Required Procedures for Archeological Field and Laboratory Work at Pinon Canyon Maneuver Site, Las Animas County, Colorado* (Dean 1992). In this document, a site is defined as a concentration of five or more unmodified flakes or a tool and an unmodified flake within an area 20 m in diameter. The criteria employed by Alexander et al. (1982) are not clearly defined, and it cannot be assumed that they used the same criteria as that of Dean (1992).

The expected results were that high-site sensitivity areas would yield more archeological resources than the medium-site sensitivity areas. Results from the project demonstrated that the site density between the two sensitivity areas differs as expected. Table 6.3 outlines the basic statistical data on the site density for the 1998 survey. The high-site sensitivity areas produced an average of one site per sixty-eight acres (.0146), while one site per eighty-six acres (.0101) is the average in the medium-site sensitivity areas. For this project, we predicted on the average to find one site per seventy-five to one hundred acres. We based this expectation on the number of sites recorded from all the previous survey data at the FCMR (see Chapter 3). Results from the survey of one site per seventy-nine acres are therefore consistent with the expected results.

Table 6.3. Site Density for Sites Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Site Sensitivity	No. of Acres	No. of Sites	Site per acre	Site Density
High	4,035.66	59	1 site per 68 acres	.0146
Medium	3,200.37	32	1 site per 100 acres	.0101
Total	7,236.03	91	1 site per 79.5 acres	.0126

The areas inventoried in 1998 are within three counties, El Paso, Fremont, and Pueblo, and on six U.S.G.S. 7.5' quadrangle maps. Table 6.4 presents the resources by recommended eligibility status and by county for the 1998 inventory. The disparity in site density between counties is not solely the result of acreage, but rather reflects actual higher site densities in Pueblo County and the southwestern portion of the base (such as Booth Mountain and the area north of Red Creek).

Table 6.4. Cultural Resources Eligibility Recommendations by County, 1998 Archeological Inventory, FCMR.

County	Eligible		Not Eligible		Total	
	No.	%	No.	%	No.	%
El Paso	6	(7)	17	(19)	23	(25)
Fremont	4	(4)	17	(19)	21	(23)
Pueblo	13	(14)	34	(37)	47	(52)
Subtotal	23	(25)	68	(75)	91	(100)

Overwhelmingly, prehistoric sites are the majority. Seventy-four (81.3%) of the sites inventoried are prehistoric, fifteen (16.5%) are historic, and two (2.2%) are multi-component. Table 6.5 divides this distribution further into site types and sensitivity areas. It shows a possible trend for prehistoric sites to occur more often in the medium-site sensitivity areas than in the high-site sensitivity areas, and conversely for historic sites to occur more often in the high-site sensitivity areas, although the differences are less than 10 percent.

Table 6.5. Site Types by Sensitivity Areas Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Site Type	Sensitivity				Total
	Medium		High		
Historic	3	(9%)	12	(20%)	15 (16.5%)
Prehistoric	28	(88%)	46	(78%)	74 (81.3%)
Multicomponent	1	(3%)	1	(2%)	2 (2.2%)
Total	32	(100%)	59	(100%)	91 (100%)

These gross site types were further broken down into individual types. Their frequency and percentage for the entire inventory are presented in Figure 6.1, and by priority areas in Figure 6.2. Individual site type definitions used in this report are taken from the MPD (Zier et al. 1997) and the CRMP (Zier et al. 1997). Zier et al. (1997) define six prehistoric and eight historic site types. Those site types encountered in this inventory are described below.

- 1) Prehistoric open sites lacking features: sites within open settings, a lack of surface features, and in association with cultural artifacts.
- 2) Prehistoric open occupation hearth site: sites within an open setting, and the presence of a hearth or hearths, but which may or may not be associated with cultural artifacts.
- 3) Prehistoric open structure sites: sites in open settings and the presence of man-made structures that include three subtypes— stone alignments, stone enclosures, and wickiups.
- 4) Prehistoric sheltered sites: location within a sheltered environment, usually a rock overhang, and with limited access. Sheltered sites are subdivided into sheltered structures, sheltered occupation, and sheltered limited use.
- 5) Prehistoric rock art sites: pictographs and petroglyphs (including so-called “tool-sharpening grooves”).
- 6) Historical mining and quarrying-related sites: sites exhibiting physical evidence of commercial extraction processes related to sandstone, clay, and other minerals.
- 7) Historical transportation network sites: sites including railroads and related features, roads and related features.
- 8) Historical homesteading/agriculture-related habitation site: sites where people lived and engaged in day-to-day domestic activities .
- 9) Historical homesteading/agriculture-related non-habitation sites: sites that cannot be clearly associated with daily domestic habitation activities. These sites may include corrals, barns, windmills,

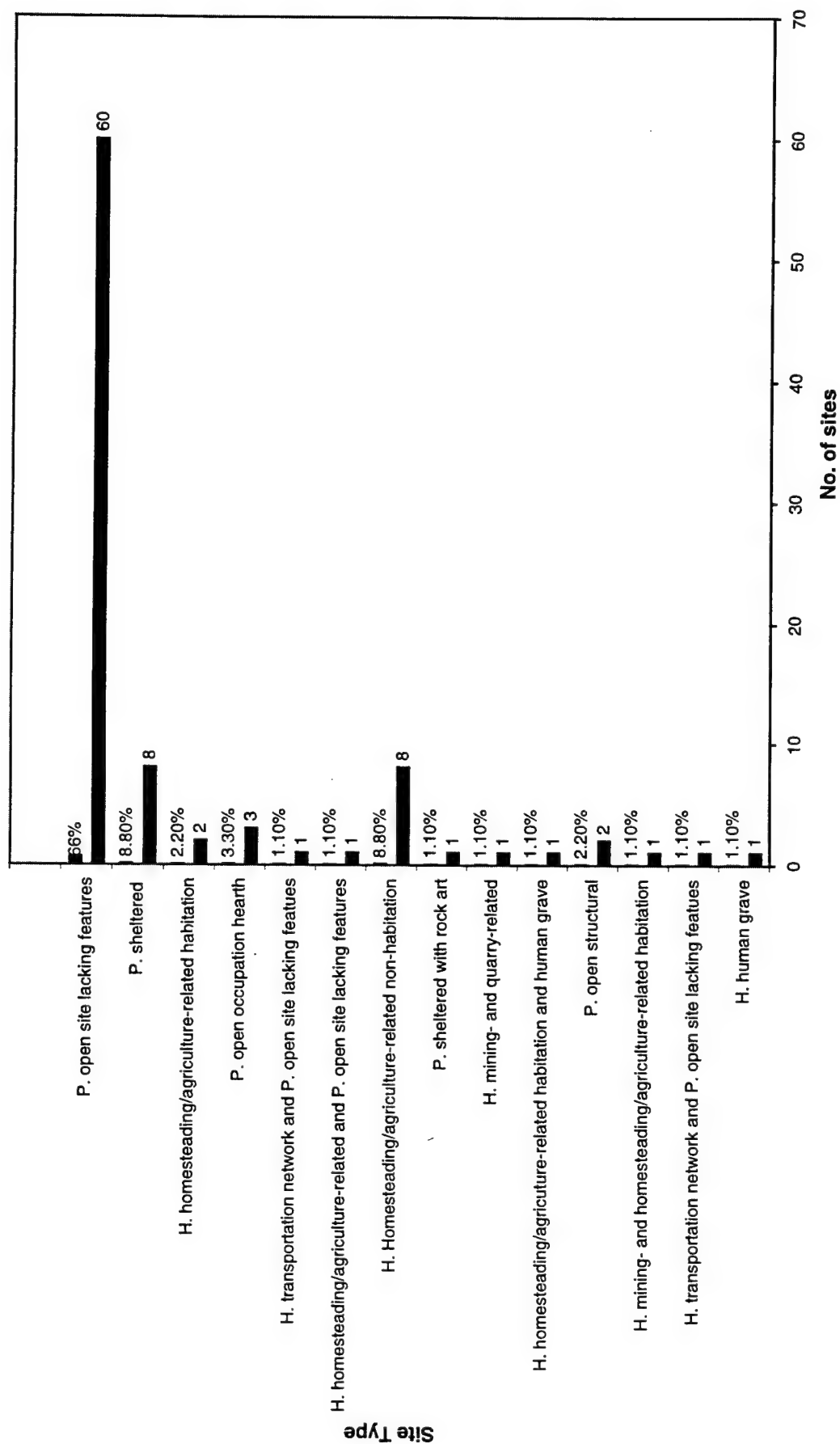


Figure 6.1. Site Types Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

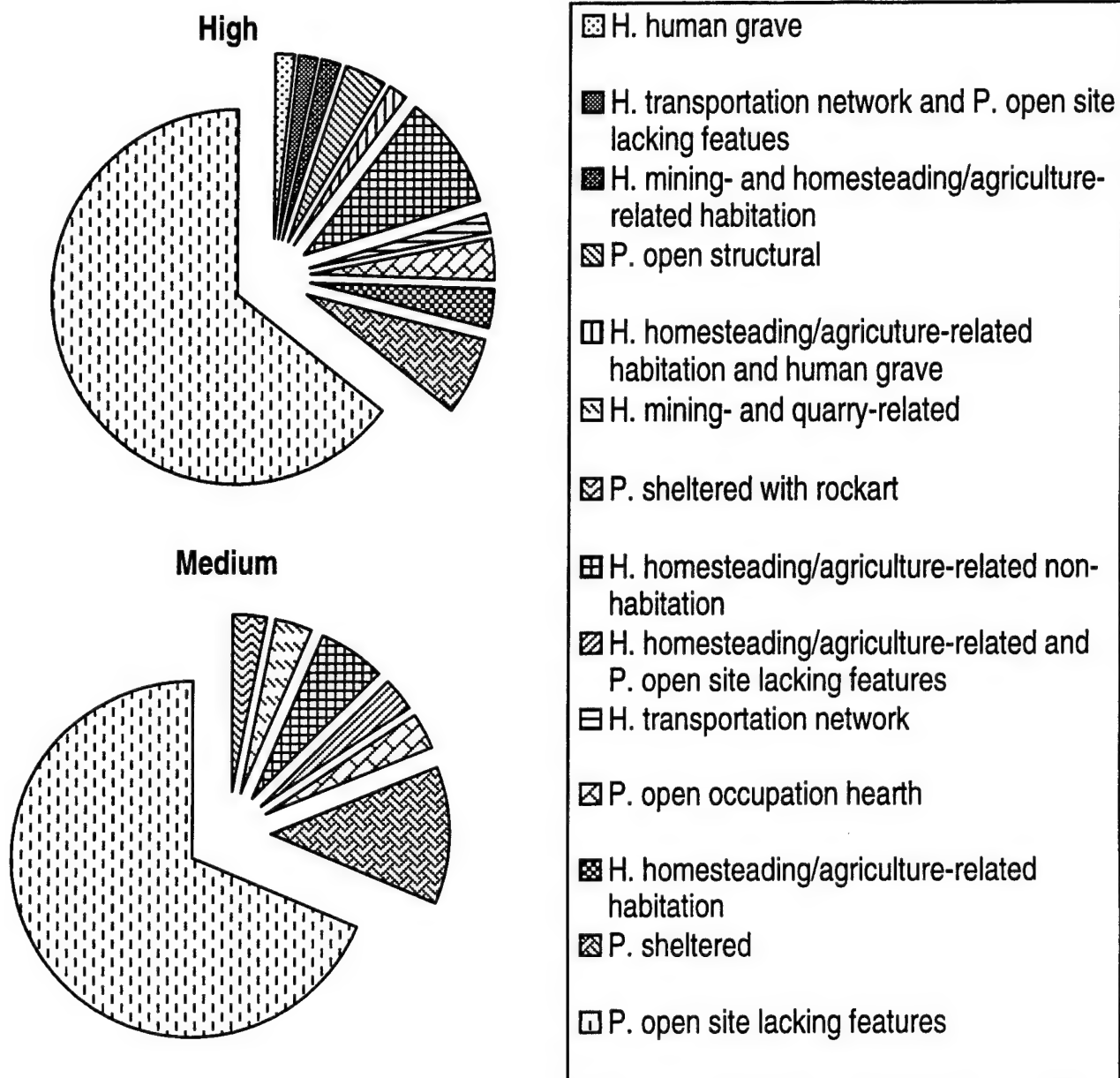


Figure 6.2. High- and Medium-site Sensitivity Areas by Site Type Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

irrigation ditches, trash scatters, fences, etc.

10) Historical human graves.

The prehistoric sites lacking features account for the majority of sites within the inventory. They number 60 and account for 66 percent of the total sites represented. Prehistoric sheltered sites and historical homesteading/agriculture-related non-habitation sites, each represented by 8 sites, comprise 17.5 percent of sites, with a variety of site types comprising the remaining 15 sites or 16.5 percent of the total. The Figures 6.2 pie charts illustrate the differences in site type frequencies for each of the priority areas. The charts are not particularly revealing, but do show three interesting trends. The first is that the homesteading/agriculture-related sites are more frequent in the high-site sensitivity areas, as are prehistoric open structural sites. Second, there is greater site type diversity represented in the high-site sensitivity areas than in the medium-site sensitivity areas. The high-site sensitivity areas are in general closer to permanent water, and this is the primary reason that historic sites and prehistoric structural sites occur more often in the high-site sensitivity areas. The closer proximity to water may be partly responsible for the greater range in site types present in the high-site sensitivity areas as well. Finally, prehistoric sites other than open structural sites occur more often in the medium-site sensitivity areas. This may reflect a greater use of the canyons and shelters of the rugged uplands than was previously thought.

Selective variables for sites inventoried during 1998 are presented in Table 6.6. The variables chosen for the table include site size, distance to permanent water, elevation, and aspect. These variables were selected because they are some of the same variables selected for in the sensitivity model developed by Zier et al. (1987). We believe that these variables and their frequency and percentage, are important to explain some of the patterns in site location at the FCMR. Site size is measured in square meters and, in most cases, the area has been converted to that of an ellipse. Aspect is the direction of the slope in degrees. Elevation is in meters above sea level. The distance to water is to the closest permanent water source believed to have been present during the prehistoric period. For our purpose, three permanent water sources are recognized; they are Red Creek, Beaver Creek, and Turkey Creek.

Chi-square tests were run on each of the variables to determine if these variables differed significantly between high- and medium-site sensitivity areas. The test was set up as a two by two-matrix using the average of each of the variables, which are expressed at the end of Table 6.6. The sites were divided into high- and medium-site sensitivity areas, and the observed results were divided into the occurrence which fell below and above the averages. We used 1 degree of freedom (df) and a chi-square result of 3.841 to determine significance. Below (Table 6.7) is an example of the chi-square test for significance for the distance to permanent water, where the average distance to permanent water was 1,736 m.

Table 6.7. Chi-square Results for Mean Distance to Water for Sites Recorded by Fort Lewis College, 1998 Archeological Inventory, FLC.

Sensitivity Area	< \bar{x}		> \bar{x}		Total
	Observed	Expected	Observed	Expected	
High	33	35.7	26	23.3	59
Medium	22	19.3	20	12.7	32
Total	55		46		

Chi-square = 1.43

Probability = .232

Df = 1

Table 6.6. Site Data Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Site No.	Site Type	Site size (m ²)	Distance to water (m)	Elevation (m)	Aspect (degrees)	Sensitivity Area
5EP2904	P. open site lacking features	350	300	1795	45	High
5EP2905	P. open site lacking features	1633	700	1814	180	High
5EP2906	P. open site lacking features	3843	680	1810	225	High
5EP2907	P. open site lacking features	2104	1463	1868	90	High
5EP2908	P. open site lacking features	432	1460	1862	270	High
5EP2909	P. open site lacking features	41	620	1935	225	High
5EP2910	H. homesteading/agriculture-related habitation site	3477	140	1794	142	High
5EP2911	P. sheltered site	198	762	1841	126	High
5EP2912	P. open site lacking features	176	480	1826	90	High
5EP2913	P. open site lacking features	490	240	1812	90	High
5EP2914	P. open site lacking features	636	1100	1939	225	High
5EP2915	P. open occupational hearth site	1236	800	1954	90	High
5EP2916	P. open site lacking features	267	360	1923	225	High
5EP2917	P. open site lacking features	40800	400	1926	180	High
5EP2918	P. open site lacking features	264	1650	1960	180	High
5EP2919	P. open site lacking features	24	950	1948	270	High
5EP2920	P. open site lacking features	1470	1550	1966	270	High
5EP2921	H. homesteading/agriculture-related habitation site	854	1555	1940	open	High
5EP2922	P. open site lacking features	102	1040	1972	135	High
5EP2923	P. open site lacking features	41	1433	1939	225	High
5EP2924	P. open site lacking features	181	1615	1832	45	High
5EP2925	P. open site lacking features	8	1615	1829	135	High
5EP2926	P. open site lacking features	363	1300	1832	270	High
5FN1578	P. open site lacking features	528	2103	1841	200	Medium
5FN1579	P. sheltered site	37	2621	1835	320	Medium
5FN1580	P. open site lacking features	769	1128	1759	open	High
5FN1581	P. open site lacking features	330	1800	1775	190	Medium
5FN1582	P. open site lacking features	942	2316	1827	140	Medium

Site No.	SiteType	Site size (m2)	Distance to water (m)	Elevation (m)	Aspect (degrees)	Sensitivity Area
5FN1583	P. open site lacking features	24	2200	1826	190	Medium
5FN1584	P. open site lacking features	791	2200	1826	140	Medium
5FN1585	P. open site lacking features	126	1707	1780	176	High
5FN1586	P. open site lacking features	216	1700	1823	120	Medium
5FN1587	H. transportation network	260	1020	1738	225	High
5FN1588	P. open site lacking features	2590	2286	1833	150	Medium
5FN1589	P. open site lacking features	2324	2500	1835	110	Medium
5FN1590	H. homesteading/agriculture-related non-habitation site	960	900	1741	150	High
5FN1591	P. open site lacking features	204	2896	1856	240	Medium
5FN1592	P. sheltered site with rock art	15298	3000	1884	60	Medium
5FN1593	H. homestead/agriculture-related non-habitation and P. open site lacking features	251	1400	1817	194	Medium
5FN1594	H. mining- and quarry-related site	47272	1402	1789	160	Medium
5FN1595	P. open site lacking features	94	1600	1900	210	Medium
5FN1596	P. open site lacking features	11	2713	1859	206	Medium
5FN1597	P. open site lacking features	51	3180	1859	90	Medium
5FN1601	P. open site lacking features	1236	2120	1817	147	Medium
5PE344	H. homestead/agriculture-related habitation and historic grave	530	200	1634	120	High
5PE625	P. open site lacking features	1864	650	1750	160	Medium
5PE2940	P. open structural site	1830	500	1804	open	High
5PE2941	P. open occupation hearth site	3	3719	1646	180	High
5PE2942	H. homestead/agriculture-related non-habitation site	1413	3719	1673	340	High
5PE2943	H. homestead/agriculture-related non-habitation site	528	3597	1670	180	High
5PE2944	P. open site lacking features	38	1555	1801	45	Medium
5PE2945	P. open site lacking features	2159	900	1838	90	High
5PE2946	P. open site lacking features	4867	1040	1835	open	High
5PE2947	P. open site lacking features	82	320	1789	225	High
5PE2948	H. homestead/agriculture-related non-habitation site	784	4633	1695	140	High
5PE2949	P. open site lacking features	1347	360	1792	158	High
5PE2950	P. open site lacking features	461	3780	1713	182	High
5PE2951	H. mining and quarrying-related and homestead/agriculture-related habitation site	1685	4877	1716	open	High
5PE2952	P. open site lacking features	53	300	1774	220	Medium
5PE2953	P. open site lacking features	1068	3414	1771	225	High

Site No.	Site Type	Site size (m ²)	Distance to water (m)	Elevation (m)	Aspect (degrees)	Sensitivity Area
5PE2954	P. open site lacking features	1492	3414	1579	180	High
5PE2955	P. open site lacking features	341	3200	1777	180	High
5PE2956	H. transportation network/P. open site lacking features	810	1900	1807	270	High
5PE2957	P. open site lacking features	393	2225	1826	234	High
5PE2958	P. sheltered site	38	4481	1887	134	High
5PE2959	H. homestead/agriculture-related non-habitation site	353	1850	1811	280	High
5PE2960	P. open site lacking features	353	300	1829	80	Medium
5PE2961	H. human grave	26	200	1792	350	Medium
5PE2962	P. open site lacking features	722	3353	1771	180	High
5PE2963	P. sheltered site	125	2987	1756	90	High
5PE2964	P. open structural site	1099	3505	1765	228	High
5PE2965	P. open site lacking features	2088	3536	1753	195	High
5PE2966	P. open site lacking features	1724	1311	1841	270	Medium
5PE2967	P. sheltered site	31	200	1792	140	Medium
5PE2968	P. open occupation hearth site	615	320	1762	145	Medium
5PE2969	P. sheltered site	55	1520	1820	108	Medium
5PE2970	P. open site lacking features	104	850	1774	150	Medium
5PE2971	P. open site lacking features	740	1433	1841	54	Medium
5PE2972	P. open site lacking features	471	1585	1811	145	Medium
5PE2973	P. open site lacking features	553	1000	1771	194	Medium
5PE2974	P. open site lacking features	119	1500	1804	176	Medium
5PE2975	P. open site lacking features	332	1500	1814	160	Medium
5PE2977	P. open site lacking features	329	1615	1786	190	Medium
5PE2978	P. sheltered site	603	1615	1768	130	Medium
5PE2979	P. open site lacking features	23	2073	1887	270	High
5PE2980	P. open site lacking features	1107	1798	1829	180	High
5PE2981	H. homestead/agriculture-related non-habitation site	316	3139	1938	240	High
5PE2982	H. homestead/agriculture-related non-habitation site	626	2896	1935	240	High
5PE2983	H. homestead/agriculture-related non-habitation site	146	1311	1796	150	Medium
5PE2984	P. sheltered site	110	1800	1823	180	High
5PE2985	P. open site lacking features	836	1000	1762	120	Medium

Site Size (m2)		Prehistoric Historic	
Average	1854	1465	3949
Median	461		
Range	3 - 47,272		
Average (high - low)	1364		
Distance to Permanent Water (m)			
Average	1736		
Median	1555		
Range	140 - 4877		
Mode	1615		
Elevation		ft	
Average	1817	5961	
Median	1817	5961	
Range	1634-1966	5361-6450	
Mode	1841	6040	
Aspect (degrees)			
Average	175		
Median	180		
Mode	180		

With 1 df, and a chi-square of 1.43, the distance to permanent water is not statistically valid between medium- and high-site sensitivity at the .05 confidence interval.

We performed chi-squares on the remaining variables, site size, elevation, and aspect. At the .05 confidence levels, the chi-square (.42) is not significant for the variable of elevation; however, there is a valid statistical difference between the two sensitivity areas for site size and for aspect. The chi-square for site size is 5.86, for aspect it is 8.06; both are significant at the .05 confidence intervals. Site size between the two areas differs, with more probability of encountering larger sites ($>1,854 \text{ m}^2$) in the high-site sensitivity areas. Aspect from the site differs between the sensitivity areas as well. Sites in the medium-site sensitivity areas are more likely to have an aspect of less than 180° , while those in the high-site sensitivity areas are more likely to have an aspect greater than 180° .

Prehistoric open sites lacking features, the most common site type in the inventory, include artifact scatters of flaked-lithic artifacts and less often flaked- and ground-stone scatters (Table 6.8). Of the total (60) open sites lacking features, 12 possess ground stone and none of the sites possess ceramic artifacts. Two lithic-quarry sites are among the sixty sites in this category. One quarry (5EP2917) is a massive outcrop of chert. The other quarry site is 5EP2924. It is a dense concentration of orthoquartzite flakes, cores, and fragments of tested orthoquartzite. The open sites lacking features vary in size from 8 m^2 to $40,800 \text{ m}^2$ (5EP2917). The average site size minus the high and low is 820 m^2 . They are found at all elevations and within all ecological zones, and have a slightly better chance of occurring in the medium-site sensitivity areas. On the average, they are 1,500 m from the closest permanent water, but they are often at greater distances from permanent water. Aspects from the sites are generally to the south. These sites may possess flaked-lithic tools including projectile points, and most temporally diagnostic artifacts found at these sites place them within the Middle Ceramic period. These sites are believed to be temporary settlements or encampments that capitalized on available local resources, such as game, lithic source material, and plants. They may reflect seasonal use of the transitional zone between high-altitude mountainous resources and those of the rivers and valleys.

Sheltered sites are the second most-common prehistoric site type encountered. There are nine of these sites in our inventory (Table 6.9). There is a slightly higher probability of encountering sheltered sites in the medium-site sensitivity areas, but their location is more a factor of available rock outcrops than it is of distance to permanent water. The average size of sheltered sites in our survey is $1,833 \text{ m}^2$, while the median size is 110 m^2 . The average size is skewed by the presence of one sheltered site with an associated extensive flaked- and ground-stone scatter. This site, 5FN1592, is also the only prehistoric site in the inventory that has rock art. Sheltered sites generally face south or east and rarely face west. The average distance to permanent water is 2,110 m, and this suggests that the availability of permanent water was not decisive in the selection of sheltered sites at the FCMR. It is suggested that sheltered sites, in general, were occupied seasonally, perhaps in the colder months as temporary camps for the procurement of resources in the uplands and away from the habitation sites of the rivers and valleys. Cultural deposits at the sheltered sites are generally deep, and suggest repeated use. Temporally diagnostic artifacts from these sites show a range of occupation periods from the Middle Archaic through the Early-Middle Ceramic; however, the majority did not produce temporally sensitive artifacts from the surface, and their age remains inconclusive. One radiocarbon sample on charred material from the Foxtrot Shelter, 5EP2911 produced a conventional age of $1150 \pm 80 \text{ B.P.}$ (Appendix IV) and a 2 sigma calibrated date range of A.D. 685 to A.D. 1025 (Beta-129181). From other investigations into sheltered sites on the FCMR (Charles et al. 1999b; Kalasz et al. 1993; Zier 1989), it is apparent that rock overhangs and alcoves were inhabited periodically throughout the habitation of the FCMR, perhaps beginning as early as the Paleo Indian period (Charles et al. 1999b) and continuing into the Middle Ceramic period (Kalasz et al. 1993; Zier 1989). Sheltered sites, then, are viewed by us as preferred locations of temporary habitation that were seasonally occupied to capitalize on upland resources during the colder months. Smooth rock faces, protected walls, and funneled lighting provide an ideal setting for rock art.

Three prehistoric open occupation hearth sites were recorded during this inventory. These sites range from a single hearth exposed in a cutbank at 5PE2941 to a large scatter of flaked- and ground-stone artifacts with two exposed hearths at 5PE2915. Two of these sites, 5EP2915 and 5PE2968, have projectile points, that are temporally diagnostic, and a radiocarbon sample from 5PE2941 provides a chronometric date for this site. The chronometric date on charred remains from 5PE2941 is $1940 \pm 70 \text{ B.P.}$ (Appendix IV), which is calibrated at 2 sigma to 80 B.C. to A.D. 235 (Beta-129180). This date places the site occupation in the later part of the Late Archaic period. The projectile point from 5EP2915 dates this site

Table 6.8. Site Data for Prehistoric Open Sites Lacking Features Recorded by Fort Lewis College, 1998
Archeological Inventory, FCMR.

Site No.	Site Size (m2)	Distance to water (m)	Elevation (m)	Aspect (degrees)	Artifacts present	Temporal period
5EP2904	350	300	1795	45	L	Unk. prehistoric
5EP2905	1633	700	1814	180	L	Unk. prehistoric
5EP2906	3843	680	1810	225	L	Unk. prehistoric
5EP2907	2104	1463	1868	90	L	Unk. prehistoric
5EP2908	432	1460	1862	270	L	M/L Ceramic
5EP2909	41	620	1935	225	L	Unk. prehistoric
5EP2912	176	480	1826	90	L	Unk. prehistoric
5EP2913	490	240	1812	90	L	Unk. prehistoric
5EP2914	636	1100	1939	225	L	Unk. prehistoric
5EP2915	1236	800	1954	90	L/GS	L Archaic/E Ceramic
5EP2916	267	360	1923	225	L	Unk. prehistoric
5EP2917	40800	400	1923	180	L	Unk. prehistoric
5EP2918	264	1650	1960	180	L	Unk. prehistoric
5EP2919	24	950	1948	270	L	Unk. prehistoric
5EP2920	1470	1550	1966	270	L/GS	E/M Ceramic
5EP2922	102	1040	1972	135	L	Unk. prehistoric
5EP2923	41	1433	1939	225	L	Unk. prehistoric
5EP2924	181	1615	1832	45	L	Unk. prehistoric
5EP2925	8	1615	1829	135	L	Unk. prehistoric
5EP2926	363	1300	1832	270	L	Unk. prehistoric
5FN1578	528	2103	1841	200	L/GS	E/M Ceramic
5FN1580	769	1128	1759	open	L	E/M Ceramic
5FN1581	330	1800	1776	190	L	Unk. prehistoric
5FN1582	942	2316	1827	140	L	E/M Ceramic
5FN1583	24	2200	1826	190	L	Unk. prehistoric
5FN1584	791	2200	1826	140	L	Unk. prehistoric
5FN1585	126	1707	1780	176	L	Unk. prehistoric
5FN1586	216	1700	1823	120	L	Unk. prehistoric
5FN1588	2590	2286	1833	150	L	E/M Ceramic
5FN1589	2324	2500	1835	110	L/GS	Unk. prehistoric
5FN1591	204	2896	1856	240	L	Unk. prehistoric
5FN1595	94	1600	1900	210	L/GS	Unk. prehistoric
5FN1596	11	2713	1859	206	L	Unk. prehistoric
5FN1597	51	3180	1859	90	L/GS	Unk. prehistoric
5FN1601	1236	2120	1817	147	L/GS	Unk. prehistoric
5PE625	1864	650	1750	160	L	Unk. prehistoric
5PE2944	38	1555	1801	45	L	Unk. prehistoric
5PE2945	2159	900	1838	90	L/GS	E/M Ceramic
5PE2946	4867	1040	1835	open	L/GS	Unk. prehistoric
5PE2947	82	320	1789	225	L	Unk. prehistoric
5PE2949	1347	360	1792	158	L	Unk. prehistoric
5PE2950	461	3780	1713	182	L	Unk. prehistoric
5PE2952	53	300	1774	220	L	Unk. prehistoric
5PE2953	1068	3414	1771	225	L	Unk. prehistoric
5PE2954	1492	3414	1579	180	L/GS	Unk. prehistoric
5PE2955	341	3200	1777	180	L	Unk. prehistoric
5PE2957	393	2225	1826	234	L	Unk. prehistoric

Site No.	Site Size (m2)	Distance to water (m)	Elevation (m)	Aspect (degrees)	Artifacts Present	Temporal Period
5PE2960	353	300	1829	80	L	Unk. prehistoric
5PE2962	722	3353	1771	180	L	Unk. prehistoric
5PE2965	2088	3536	1753	195	L/GS	Unk. prehistoric
5PE2966	1724	1311	1841	270	L	L Archaic/E Ceramic
5PE2970	104	850	1774	150	L	Unk. prehistoric
5PE2971	740	1433	1841	54	L	Unk. prehistoric
5PE2972	471	1585	1811	145	L	Unk. prehistoric
5PE2973	553	1000	1771	194	L	Unk. prehistoric
5PE2974	119	1500	1804	176	L	Unk. prehistoric
5PE2975	332	1500	1814	160	L	M Ceramic-L Prehistoric
5PE2977	329	1615	1786	190	L	Unk. prehistoric
5PE2979	23	2073	1887	270	L	Unk. prehistoric
5PE2980	1107	1798	1829	180	L	E Ceramic
5PE2985	836	1000	1762	120	L	Unk. prehistoric

*L= flaked-lithic artifact, G=ground stone

Site size (m2)

Average	1449
Median	432
Range	8 - 40,000
Average (high - low)	820

Elevation (m)

Average	1831
Median	1826

Distance to permanent water (m)

Average	170
Median	180
Mode	300

Aspect (degrees)

Average	170
Median	180
Mode	180

Table 6.9. Site Data for Prehistoric Sheltered Sites Recorded by Fort Lewis College, 1998
Archeological Inventory, FCMR.

Site No.	Site size (m2)	Distance to water (m)	Elevation (m)	Aspect (degree)	Sensitivity	Temporal period
5EP2911	198	762	1841	126	High	M/Ceramic
5FN1579	37	2621	1835	320	Medium	Unk. prehistoric
5FN1592	15298	3000	1884	60	Medium	M/Archaic-E/M Ceramic
5PE2958	38	4481	1887	134	High	Unk. prehistoric
5PE2963	125	2987	1756	90	High	Unk. prehistoric
5PE2967	31	200	1792	140	Medium	Unk. prehistoric
5PE2969	55	1520	1829	108	Medium	Unk. prehistoric
5PE2978	603	1615	1768	130	Medium	Unk. prehistoric
5PE2984	110	1800	1823	180	High	Unk. prehistoric

Site Size (m2)

Average 1833
Median 110
Average (high-low) 166

Elevation (m)

Average 1824
Median 1829
Range 1756-1887

Distance to permanent water (m)

Average 2110
Median 1800
Range 200-4481

Aspect (degrees)

Average 143
Median 130
Range 60-320

to the Late Archaic to Early Ceramic period, and the projectile point from 5EP2968 is dated from the Early to Middle Ceramic periods. The average size of the occupation hearth sites is 618 m. The average distance to permanent water is 1,616 m, and the average elevation is 1,787 m asl. The single hearth site, 5PE2941, however, skews the data because the site consists solely of a hearth and is over 3,719 m from the closest permanent water. The other sites are larger, are closer to permanent water, and contain flakes and ground stone. Based on this very small sample, open occupation hearth sites tend to occur at lower elevations, are close to permanent water sources, exhibit both hunting and gathering tools, date to the Late Archaic through Middle Ceramic periods, and are east- to south-facing. There is a greater probability for open occupation hearth sites to be located in high-site sensitivity areas, probably because of the proximity to permanent water.

There are two open structural sites in this inventory, 5PE2940 and 5PE2964. Both are within high-site sensitivity areas, one near Turkey Creek and the other within the interior of Booth Mountain. The average elevation of the two sites is 1,785 m. They are located in different environmental situations— 5PE2940 is on a ridge that overlooks Turkey Creek to the east, and 5PE2964 is at the edge of a drainage in the interior of Booth Mountain. Although this site is over 3,500 m from the closest permanent water, cottonwoods were observed in the drainage below the site, indicating at least a source of ground water. Each site possesses a single circular sandstone alignment. Two projectile points from 5PE2940 date to the Middle Ceramic to the Late Prehistoric periods. Their location along ridges, which command views, the generally shallow sediment deposits, and availability of water are common characteristics for the open structural sites at the FCMR (Charles et al. 1999a, 1999b; Van Ness et al. 1990). It is suggested that in general these sites date to the Middle Ceramic period and that they are related to the larger structural sites along Turkey Creek (Charles et al. 1999a; Van Ness et al. 1990; Zier et al. 1997). A general low diversity of artifacts on some of these sites such as the Sullivan Butte site, 5PE886, and site 5PE750 suggests that at least some of these sites may have served functions other than procuring resources.

In general, historic sites are under-represented in this inventory. Fifteen (17%) of the total are historic sites (Table 6.10). The average distance to permanent water for the historic sites is 2,096 m. The average size of historic sites is 3,949 m². One large clay quarry, however, skews the data, since this site is 47,272 m². Discarding the high and the low values gives an average site size for historic sites of 589 m². Aspect of historic sites is southwest, and this differs from the mean aspect of prehistoric sites which is to the south and southeast.

The greatest number of historic sites in the inventory was homesteading/agriculture-related non-habitation sites. These number eight or 8.8 percent of the total. They occur more often in the high-site sensitivity areas. There are two main categories within this site type, fences and trash scatters, and they are equally represented. The fences are mostly constructed of juniper logs and may have some barbed wire as well. They are common historic properties, especially along the edges of high meadows and saddles, and they are believed to be related to cattle ranching in the first half of the 20th century. The trash scatters are most often dated to the first third or half of the 20th century. They are usually deposits of household-related items that have been dumped along existing transportation routes.

Homesteading/agriculture-related habitation sites are the second largest historic type sites represented. Four historic habitation sites occur in the inventory, one possibly associated with mining activities and the other with a human grave. Both have definite indications for domestic activities. All of these habitation sites are located within high-site sensitivity areas. Mean distance to permanent water is 1,693 m. With the exception of 5PE2951, these sites are in close proximity to Turkey Creek, and we believe the close proximity to permanent water accounts for their occurrence in the high-site sensitivity areas.

Single occurrences of a transportation route, a grave inscription, and a clay mine complete the historic site assemblage. The transportation route (5FN1587) is a short segment of a historic road near the eastern boundary of the FCMR. An inscription on a sandstone bluff (5PE2921) marks the location of the supposed burial of John H. Lawrence (1801-1887), and the large clay quarry (5FN1594) was probably mined in the first half of the 20th century.

As a final exercise, sites were placed within major temporal categories, which were decided on primarily by the association of temporally sensitive artifacts, mostly projectile points. In one case, the temporal period was based on the association of architecture. Historic sites are included in a single category. The result of this classification is presented in Figure 6.3. The majority of sites (63%) fall within the unknown prehistoric category, with historic sites (16%) the second most

Table 6.10. Historical Site Data Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Site No.	Site Type	Site size (m ²)	Distance to water (m)	Elevation (m)	Aspect (degrees)	Site category
5EP2910	H. homesteading/agriculture-related habitation site	3477	140	1794	142	Habitation
5EP2921	H. homesteading/agriculture-related habitation site	854	1555	1940	open	Habitation
5FN1587	H. transportation network	260	1020	1738	225	Vehicular
5FN1590	H. homesteading/agriculture-related non-habitation site	960	900	1741	150	Fence
5FN1594	H. mining- and quarry-related site	47272	1402	1789	160	Clay
5PE344	H. homesteading/agriculture-related habitation site and historic grave	530	200	1634	120	Habitation
5PE2942	H. homesteading/agriculture-related non-habitation site	1413	3719	1673	340	Trash
5PE2943	H. homesteading/agriculture-related non-habitation site	528	3597	1670	180	Trash
5PE2948	H. homesteading/agriculture-related non-habitation site	784	4633	1695	140	Trash
5PE2951	H. mining and homesteading/agriculture-related habitation site	1685	4877	1716	open	Habitation?
5PE2959	H. homesteading/agriculture-related non-habitation site	353	1850	1811	280	Trash
5PE2961	H. human grave site	26	200	1792	350	Grave
5PE2981	H. homesteading/agriculture-related non-habitation site	316	3139	1938	240	Fence
5PE2982	H. homesteading/agriculture-related non-habitation site	626	2896	1935	240	Fence
5PE2983	H. homesteading/agriculture-related non-habitation site	146	1311	1796	150	Fence

Site size (m²)		Elevation (m)
Average	3949	1777
Median	626	1789
Average (high-low)	589	1634-1811
Distance to permanent water		Aspect (degrees)
Average	2096	209
Median	1789	180
Range	140-4877	120-350

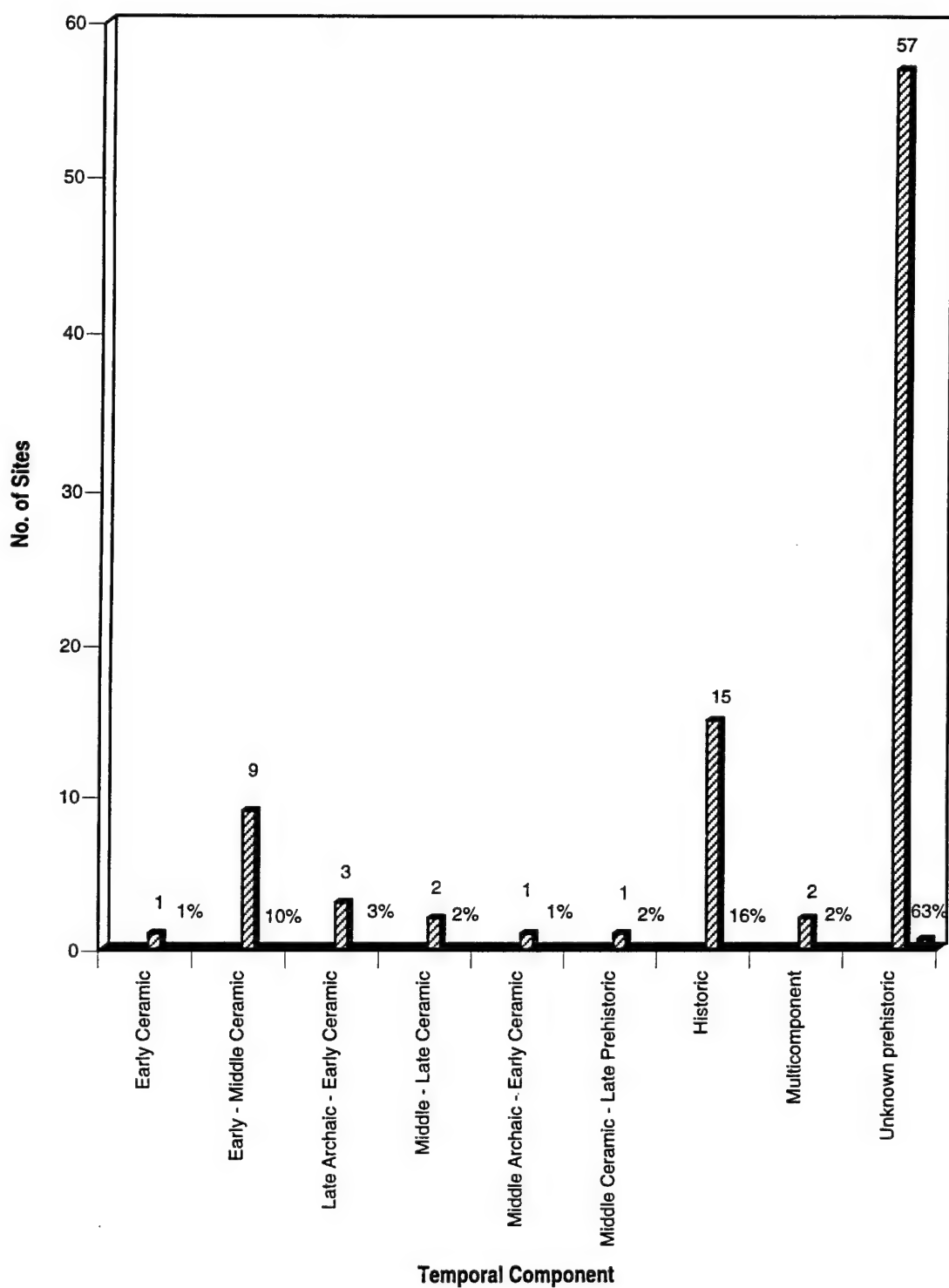


Figure 6.3. Chronological Data for Sites Recorded by Fort Lewis College, 1998 Archeological Inventory, FCMR.

common category. Ceramic period sites account for the vast majority of datable prehistoric sites. Ceramic period occupation is more apparent at the FCMR than all preceding periods combined. Early Ceramic period sites are relatively common at the FCMR, although it is possible that some sites identified as being Early Ceramic period sites are in fact Middle Ceramic period sites. Cord-marked pottery exists on both Early and Middle Ceramic period sites, and in the absence of chronometric dates the two are often indistinguishable (Zier et al. 1997). For this reason, we have lumped the majority of prehistoric sites with temporally sensitive projectile points into the Early-Middle Ceramic period. Clearly, as Figure 6.3 shows, this occupation at the FCMR is substantial and accounts for 10 percent of all sites in the inventory. These sites can be large with architecture, and are often in close proximity to the major watercourses. Rock shelters were also favored habitats during this period. Several sites with Early and Middle Ceramic components have been test excavated. Tested sites with Early Ceramic period dates include Recon John Shelter (Zier 1989), Mary's Fort (Zier and Kalasz 1985), Gooseberry Shelter (Kalasz et al. 1993), Ocean Vista (Kalasz et al. 1993), Two Deer Shelter (Zier et al. 1996), and the Red Creek Burial (Butler et al. 1986). Sites with Middle Ceramic period components include Avery Ranch (Zier et al. 1988), Mary's Fort, (Zier and Kalasz 1985), Woodbine Shelter, Sullivan Shelter, Ocean Vista, and Windy Ridge (Kalasz et al. 1993), Two Deer Shelter (Zier et al. 1996), and 5EP2524 (Charles et al. 1999a). Radiocarbon samples were collected during inventory from the Foxtrot Shelter (this report), and during site evaluation from 5PE366 (Charles et al. 1999b). These two shelters produced radiocarbon ages that place their occupation during the Middle Ceramic period.

Sites with Archaic components are rare in this inventory as they are for the FCMR as a whole. A hearth site produced a date, which belongs within the Late Archaic period, two sites had both Archaic and Ceramic period projectile points, suggesting they were multi-component, and one site has a projectile point that could be transitional between the Late Archaic and Early Ceramic periods. Few sites at the FCMR date to the Archaic period. Early and Middle Archaic components are rarer than Late Archaic components (based on projectile point frequencies). A few rock shelter sites from previous investigations (Kalasz et al. 1993; Zier 1989; Zier et al. 1996) have produced chronometric dates from all stages of the Archaic period. It should be noted that the majority of prehistoric sites do not possess temporally sensitive artifacts and, therefore, remain undated. It is not possible to determine how many of these may be associated with Archaic occupation.

The low representation of historic sites is believed to be directly related to the terrain, and, in the case of historic habitation, the distance from permanent water. Much of the survey area is along wooded slopes and often in the interior of the ridges such as Booth Mountain, Rule Canyon, and Wild Mountain. The terrain is often steep and access difficult. Historic sites in these areas are primarily related to ranching, but are not directly associated with habitation sites. These sites consist of juniper-log fences and transportation routes, some of which have associated trash scatters. Historic habitation sites are more often found at lower elevations, near the toe of fans or terraces and close to permanent water, e.g., Turkey Creek. Sites related to mines and quarries are located at the source materials; therefore, these sites occur in a variety of topographic situations related mostly to bentonite (clay) and sandstone outcrops. Historic trash scatters are often located within close proximity to existing transportation routes and are often at great distances from permanent water sources.

Chapter 7

Material Culture

INTRODUCTION

A total of 124 stone tools and 11 historic artifacts was collected over the 1998 field season. Flaked-lithic analysis of debitage was conducted in the field and, therefore, these artifacts were not collected. This chapter presents the results of the laboratory analysis of the collected artifacts. The numbers for the artifacts represent individual catalog numbers. Basic statistical analysis of the flaked-lithic debitage results is included as well.

FLAKED-STONE TOOLS

Flaked-lithic artifacts were divided into the following categories: bifaces, flake tools, cores, complete flakes, and broken debitage. Additionally, the flake tools were further separated into patterned and unpatterned flake tools (Ahler 1997). An unpatterned flake tool is a flake tool where one or more edges has been culturally modified, and in which the tool outline is largely a product of flake shape as opposed to a patterned tool in which the outline is created by the knapper (Ahler 1997). Patterned flake tools include bifaces, projectile points, scrapers, drills, and spokeshaves. Unpatterned tools consist of retouched or utilized flakes. Non-flaked stone tools, which have been culturally modified, are discussed as a separate category. These tools include cores, core tools, and hammerstone.

Patterned Flake Tools

Bifaces A total of fifty-two bifaces were collected from twenty-five prehistoric sites and seven isolated finds. Excluding the isolated finds, the majority (88%) were recovered from prehistoric open sites lacking features, which is comparable to the percentage (81%) of that site type for all prehistoric sites recorded during this survey. Only three of the sites represent different site types; 5EP2915 is a prehistoric open occupation hearth site, 5FN1592 is a prehistoric sheltered site, and 5PE2940 is a prehistoric open structural site. Individual bifaces were found at seven isolated finds: 5EP2933, 5FN1599, 5FN1604, 5FN1613, 5PE2976, 5PE3003, and 5PE3019.

The bifaces consist of both broken and complete specimens. These tools were classified following the standards in Dean (1992). Additionally they were sorted into size grades. Complete bifaces were separated from broken bifaces, and quantitative information for the two categories is provided in Tables 7.1 and 7.2.

Based on the analysis, several inferences can be made. Chert is the raw material of choice for biface production, accounting for 65% of all raw material types in this assemblage. The chert occurs in a variety of colors which include white, red, gray, and brown. Some chert is available locally, while others were procured elsewhere. The next most common (12%) raw material type is orthoquartzite, with six specimens represented. Orthoquartzite commonly outcrops with sandstone at the FCMR. Other raw material types observed within this assemblage include chalcedony (4), silicified wood (3), quartzite (2), obsidian (2), and siltstone (1). All of these materials can be procured locally, with the exception of the obsidian. One obsidian biface was found at site 5EP2914 and one at isolated find 5EP2933. Both occur in fairly close proximity (0.2 - 0.8 mile) to Turkey Creek. At least two excavated sites near Turkey Creek (Avery Ranch and Recon John Shelter) have yielded small amounts of obsidian. These two biface fragments and one small core fragment, which was also recovered from 5EP2933, represent the only obsidian artifacts found during the 1998 survey.

Thirty-four (65%) of the bifaces are broken. As might be expected, the majority of broken bifaces is small. Just over 90% of these bifaces are less than 1", with well over half (59%) between ½" - 1". Biface tips are the most common (41%) element represented. Cultural modifications on the broken bifaces continue up to where the break occurred on all specimens. These bifaces were broken either through use or during manufacture.

Table 7.1. Complete Bifaces Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Catalog Number	Raw Material	Weight(gm)	Max. Length	Max. Width	Max. Thick.	Hafted	Size	Comments
5EP2915.1b	Chert	4.4	39	23	5	N	2	Lenticular
5EP2917.1a	Chert	0.8	19	13	4	N	1	Small lenticular
5EP2920.1b	Chert	47.6	106	37	13	N	3	Large knife
5FN1578.1c	Chert	13.9	39	29	13	N	2	Ovoid
5FN1582.1b	Orthoquartzite	6	38	25	7	N	2	Lenticular
5FN1582.1c	Chert	2.5	21	17	6	Y	2	Hafted biface
5FN1588.1c	Chert	14.8	41	30	12	N	2	Ovoid
5PE2947.1b	Chert	3.9	26	24	7	N	2	Ovoid
5PE2949.1a	Orthoquartzite	20	58	39	8	N	3	Lenticular
5PE2956.1a	Orthoquartzite	14.6	37	32	10	N	3	Lenticular
5PE2956.1c	Chert	13	44	27	12	N	2	Lenticular
5PE2956.1e	Chalcedony	16.3	35	34	12	N	3	Ovoid
5PE2956.1h	Chert	5.6	36	26	6	N	2	Lenticular
5PE2960.1a	Chert	1.7	22	17	5	N	2	Lenticular
5PE2977.1a	Quartzite	7.6	41	23	9	N	2	Lanceolate
5PE2985.1a	Chalcedony	0.5	17	11	3	N	1	Small lenticular
5PE3019.1a	Chalcedony	15.7	41	33	12	N	2	Ovoid
5PE625.1a	Chert	2.6	35	21	4	N	2	Lenticular

Average
Median
Mode

10.6
6.8
NA

25.6
25.5
23

8.2
7.5
12

KEY
Size:

1= 0-1/2"
2= 1/2-1"
3= 1-1 1/2"
4= 1 1/2-2"

Table 7.2. Broken Bifaces Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Catalog Number	Raw Material	Weight (gm)	Hafted	Size	Comments
5EP2914.1a	Obsidian	0.7	N	1	Fragment with one edge
5EP2933.1a	Obsidian	0.9	N	1	Fragment one edge
5FN1578.1a	Chert	1.8	N	2	Biface tip
5FN1582.1a	Chert	6.9	N	2	Fragment with one edge
5FN1583.1a	Chert	5.5	Y	2	Hafted biface fragment
5FN1584.1a	Chert	0.5	N	1	Biface tip
5FN1584.1b	Chert	0.6	N	1	Biface tip
5FN1588.1b	Chert	0.1	N	1	Biface tip
5FN1592.1k	Chert	2.1	N	1	Biface tip
5FN1592.1l	Silicified wood	4.2	N	2	Biface tip
5FN1595.1a	Quartzite	1.6	N	2	Biface tip
5FN1599.1a	Chert	2.2	N	2	Missing tip
5FN1604.1a	Orthoquartzite	2.3	N	2	Biface tip
5FN1613.1a	Chert	40.1	N	3	Large broken distal
5PE2940.1c	Siltstone	3.9	N	2	Fragment with one edge
5PE2947.1a	Chert	0.4	N	1	Biface tip
5PE2954.1c	Chert	35.5	N	4	Large oval shape
5PE2956.1b	Chert	4.1	N	2	Possible tip
5PE2956.1d	Chert	2.6	N	2	Broken oval shape
5PE2956.1f	Chert	3.1	N	2	Medial fragment
5PE2957.1a	Chert	0.7	N	2	Biface tip
5PE2960.1b	Chert	5.4	N	2	Fragment with two edges
5PE2960.1c	Silicified wood	0.3	N	1	Biface tip
5PE2962.1a	Orthoquartzite	5.9	N	2	Broken oval shape
5PE2965.1a	Chert	2.8	N	2	Broken distal
5PE2965.1b	Chert	0.1	N	1	Possible medial
5PE2965.1c	Orthoquartzite	1.9	N	2	Biface tip
5PE2965.1d	Chalcedony	10.4	N	2	Broken distal
5PE2966.1a	Silicified wood	0.4	N	1	Small oval shape
5PE2970.1a	Chert	11.4	N	3	Broken oval shape
5PE2976.1a	Chert	2.2	N	2	Fragment with one edge
5PE2985.1b	Chert	0.1	N	1	Fragment with one edge
5PE3003.1a	Chert	3.5	N	2	Broken distal
5PE625.1b	Chert	8.8	N	2	Biface tip

Average 5.1

KEY

Size:

1= 0-1/2"

2= 1/2-1"

3= 1-1 1/2"

4= 1 1/2-2"

Two of the bifaces exhibit evidence of hafting. One broken biface (5FN1583.1a) is stemmed and is missing the proximal end. The complete hafted biface (5FN1582.1c) has been bifacially thinned and has a slight notch on one side. This biface may represent an early stage of projectile point manufacture.

In addition to the standard measurements for complete bifaces, these artifacts were size sorted. The complete bifaces are generally as small as the broken bifaces, with 78% of the complete bifaces less than 1" in size. This would indicate that despite being complete, bifaces generally are small. The most common (56%) shape of the complete bifaces is lenticular. Lenticular is defined as narrow and pointed at the proximal end with a broader and rounded distal end. The two complete bifaces (5PE2949.1a and 5PE2956.1h) illustrated in Figure 7.1a, 7.1b are examples of lenticular-shaped bifaces. Ovoid-shaped bifaces account for 28% of the collected assemblage. Single occurrences include a hafted biface, a lanceolate-shaped biface (wide in middle and equally narrow at both ends), and a knife. The lenticular-shaped bifaces are thinner than the ovoid types and average around 6.4 mm thick. The ovoid-shaped bifaces are thicker (11.2 mm) and are not completely thinned. This may indicate differences between stages of tool manufacture or in the final function of the tool.

Projectile Points Twenty-nine projectile points were collected during the inventory of selected portions of the FCMR. Five projectile points were collected from four sites in El Paso County. These projectile points are from three different site types: 5EP2911 is a prehistoric sheltered site, 5EP2915 (two specimens) is a prehistoric open occupational hearth site, and 5PE2908 and 5EP2920 are prehistoric open sites lacking features. Sixteen projectile points were collected from six sites and two isolated finds (5FN1600 and 5FN1612) in Fremont County. Nine of the projectile points are from 5FN1592 with single occurrences at all other sites. 5FN1592 is a prehistoric sheltered site with rock art, while the other five sites (5FN1578, 5FN1580, 5FN1582, 5FN1588, 5FN1589) are all prehistoric open sites lacking features. Eight projectile points were collected from six sites and one isolated find (5PE3010) in Pueblo County. 5PE2940 (two specimens) is a prehistoric open structural site, 5PE2968 is a prehistoric open occupational hearth site, and the remaining four sites (5PE2945, 5PE2966, 5PE2975, 5PE2980) are prehistoric open sites lacking features. These tools were categorized according to Dean (1992). Major source references for the typological identification of the projectile points include Lintz and Anderson (1989), and Charles et al. (1999b). Quantitative information is presented in Table 7.3, which provides a concise reference of the more general information.

Four raw material types were used for the manufacture of projectile points. Chert is the dominant material type, accounting for 62 percent of the assemblage. A variety of colors were used including gray, brown, tan, red, and white. Five projectile points are complete; the remaining specimens are missing at least small portions of one element or another. Two-thirds of the projectile points are missing the blade tips.

The discussion of projectile point analysis is organized chronologically within each of the three counties.

El Paso County

5EP2908.1a (Figure 7.2a). This is a small unnotched, triangular projectile point that is manufactured from chalcedony. The tip of the blade element is missing. This point has sharp blade edges, slightly convex blade edges, pointed tangs, a concave base, and is bi-convex in cross-section. Projectile points in Category P50 in Lintz and Anderson (1989: 175), which date from A.D.1000-A.D.1700, best resemble this specimen. The closest match to the collected point is specimen F (Lintz and Anderson 1989:289), which is from a site that has a dated radiocarbon sample of A.D.1250 (Lintz and Anderson 1989: 175). Similar projectile points (Type XII) are noted from 5PE56, the Avery Ranch site (Zier et al. 1988:139). This site is radiocarbon dated between A.D. 900 and A.D. 1310 (Zier et al. 1997:II.19-20). These comparisons suggest that this projectile point type dates to the Middle Ceramic to Late Prehistoric periods.

5EP2911.2a (Figure 7.2b). This projectile point is a small stemmed point made from a light brown chert. This artifact was recovered from a shovel test within a shelter. The point was so fragile that after recovery it broke while being gently cleaned. Characteristics of the projectile point include a sharp point, triangular blade with slightly convex edges, barbed shoulders,

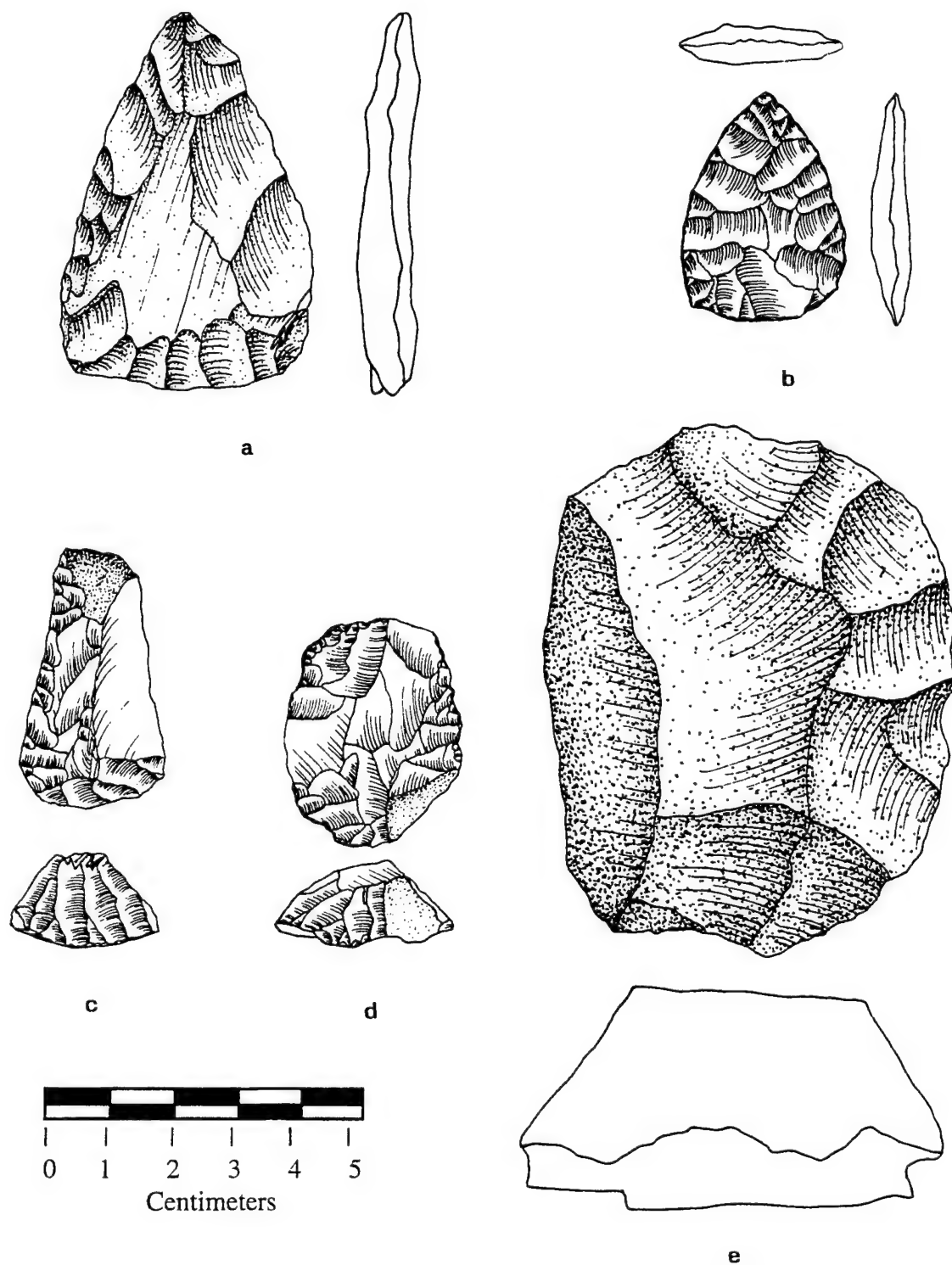


Figure 7.1 Patterned Flake Tools Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR. a (5PE2949.1a), b (5PE2956.1h), c (5FN1582.1e), d (5PE2975.1c), e (5FN1582.1g).

Table 7.3. Projectile Points Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Catalog Number	Raw Material	Length (mm)	Width (mm)	Thickness (mm)	Blade Length (mm)	Blade Width (mm)	Stem Width (mm)	Stem Length (mm)	Base Width (mm)	Weight (gms)
5EP2908.1a	Chalcedony	19.7*	15.9	3.5	19.7*	15.9	NA	NA	15.9	>1.1*
5EP2911.2a	Chert	18.2	13.4	2.7	14.6	13.4	3.6	3.6	5.7	0.5
5EP2915.1a	Chert	26.8*	22.5	5.5	12.5*	18.7*	22.5	11.4	6.4	>3.8*
5EP2915.1d	Orthoquartzite	19.1*	15.8	5.0	11.7*	14.9	11.4	5.8	15.8	>1.8*
5EP2920.1a	Chert	20.2*	14.7	4.1	20.2*	14.7	NA	NA	14.7	>1.2*
5FN1578.1a	Silicified wood	23.4*	17.6*	3.9	19.9	17.6*	6.0*	3.5*	6.0*	>1.8*
5FN1580.1a	Chert	27.4	14.5	3.0	21.2	13.8	8.7	6.2	14.5	1.1
5FN1582.1d	Chert	16.9*	14.2	3.6	14.7*	14.1	8.1	2.2	8.1	>.9*
5FN1588.1a	Chert	28.5*	18.8*	4.2	21.6*	18.8*	12.4	6.9	16.2*	>2.4*
5FN1589.1a	Chert	24.8*	20.9*	5.2	18.8*	20.9*	15.2*	7.1	14.8*	>2.7*
5FN1592.1a	Chert	29.5*	27.1*	6.2	17.8*	27.1*	14.2	11.7	16.2	>4.4*
5FN1592.1b	Chert	22.6*	14.4	3.4	19.3*	14.4	8.8	3.3	9.2*	>1.1*
5FN1592.1c	Orthoquartzite	36.1*	23.6	7.0	26.3	23.6	14.9	9.8	15.4	>5.4*
5FN1592.1d	Chert	10.9*	20.9	4.3*	7.6*	20.9	11.7	3.3	12.1	>.9*
5FN1592.1e	Chert	21.9*	20.9*	6.9*	11.2*	20.9*	9.1*	10.7*	11.8*	>2.9*
5FN1592.1f	Chert	22*	15.6*	3.9*	18.8*	14.9*	8.6*	3.2*	9.3*	>1.2*
5FN1592.1g	Silicified wood	29.6*	20.8	4.5	22.4*	20.8	8.4	7.2	10.7	>2.3*
5FN1592.1h	Chert	25.9*	18.2	5.3	17.4*	18.2	13.8	8.5	14.5	>2.6*
5FN1592.1i	Chert	25.5*	20.5	6.5	15.7*	20.5	13.7	9.8	14.7	>3.0*
5FN1600.1a	Silicified wood	30.5*	28.5	4.1	19.1*	28.5	12.8	11.4	6.0*	>3.5*
5FN1612.1a	Chert	29.8	26.1*	6.8	22.3	26.1*	14.5	3.7	17.4*	>4.6*
5PE2940.1a	Chert	14.4	11.2*	3.5	10.0	10.1	8.8	4.3	11.4*	>.7*
5PE2940.1b	Chert	22.0*	13.7	3.7	17.0*	13.7	11.8	5.0	12.5	>1.1*
5PE2945.1a	Silicified Wood	22.2	15.2*	3.8	16.4	15.2*	5.0	3.6	6*	>.7*
5PE2966.1b	Orthoquartzite	26.6*	27.8*	4.6	19.5*	27.8*	9.5	7.1*	10.3	>1.8*
5PE2968.1a	Orthoquartzite	22.9	17.0	4.4	18.3	17.0	5.9	2.6	6.9	8.5
5PE2975.1b	Chalcedony	22.5	9.7	3.4	18.7	9.5	8.0	3.8	8.8	1.7
5PE2980.1a	Silicified wood	17.0*	13.5	2.9	11.2*	13.5	5.5	5.8	8.2*	>1.4*
5PE3010.1a	Chert	45.4	18.4	5.6	35.2	18.8	9.9	10.2	10.5	8.1
* indicates partial measurement										
Average		25.4	17.4	4.5	20.3	16.6	10.6	6.4	11.9	4.0

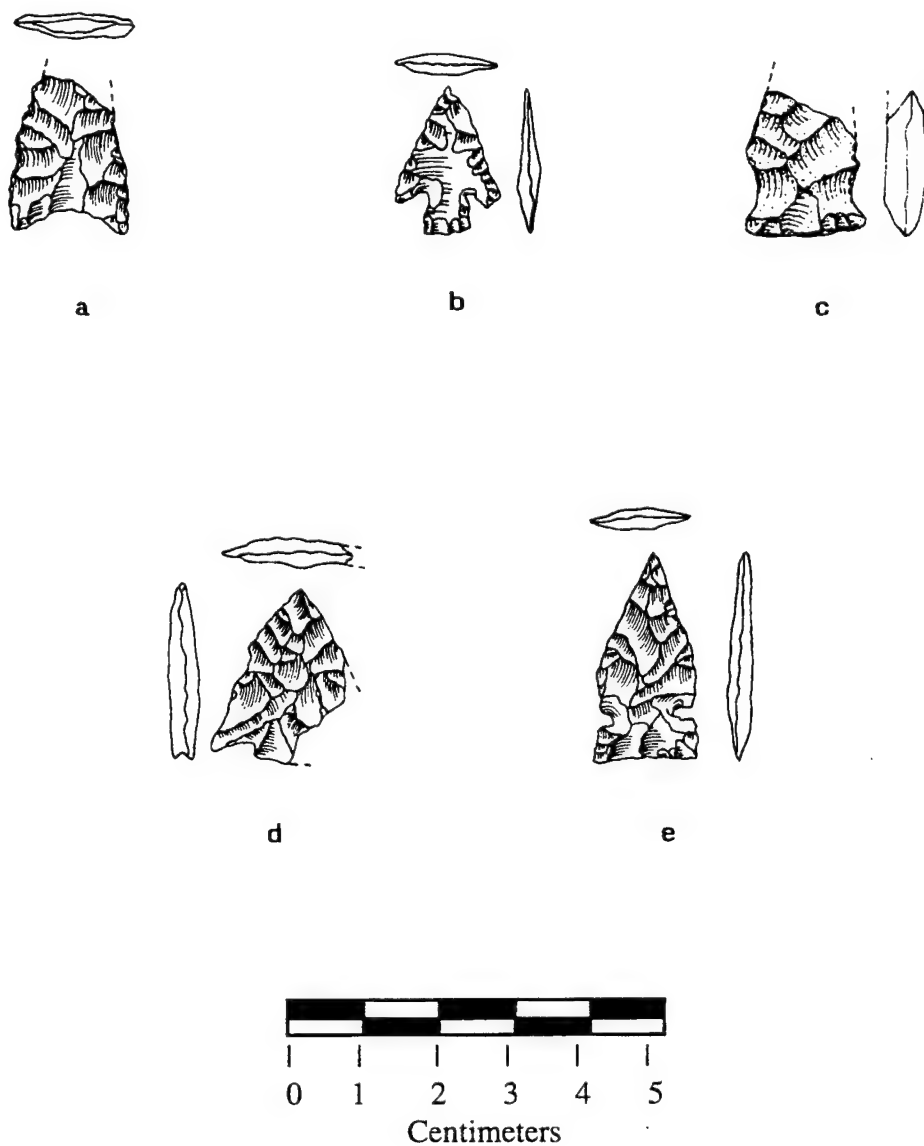


Figure 7.2. Projectile Points, El Paso and Fremont Counties Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR. a (5EP2908.1a), b (5EP2911.2a), c (5EP2915.1d), d (5FN1578.1a), e (5FN1580.1a).

a slightly expanding stem, rounded tangs, and a straight base, and it is biconvex in cross-section. Projectile points in Category P62 (Lintz and Anderson 1989:193), which date from A.D.500-A.D.1400, resemble this specimen. Similar projectile points (Zier 1989:142) have been noted at the Recon John Shelter (5PE648) and are identified as Type 14. These comparisons suggest that this projectile point dates to the Early to Middle Ceramic periods.

5EP2915.1a. Two projectile points were collected from this site. The first projectile point discussed is a large expanding-stemmed point manufactured from yellow-brown chert. The tip and part of the base, which includes one tang, are missing. It appears that the artifact was reused after the tip snapped off. The edge of the break has been unifacially retouched. Observable characteristics include a broad blade with slightly convex edges, barbed shoulders, a slightly expanding stem, a rounded tang, and a bi-convex cross-section. Specimens in Category P21 (Lintz and Anderson 1989:136) resemble this specimen and they date from 1000 B.C.-A.D. 1000. Large, expanding-stemmed projectile points are noted from the FCMR (Charles et al. 1999b: Appendix II) but none accurately match this particular artifact. These similar projectile points are tentatively dated to the Late Archaic to the Early Ceramic periods.

5EP2915.1d (Figure 7.2c). The second projectile point collected from this site is also classified as a large expanding stemmed point. This point is manufactured from gray orthoquartzite, which is a common local raw material type. The tip is missing. Characteristics include a broad triangular blade with convex edges, rounded shoulders, a broad expanding stem, pointed tangs, a slightly convex base, and a bi-convex cross-section. Specimens in Category P35 (Lintz and Anderson 1989:Figure 153), which best resemble this projectile point, date from 1000B.C.-A.D.1200. A similar projectile point was collected in 1996 by FLC (Charles et al. 1999a:6.15) from a site that dates from the Late Archaic to the Middle Ceramic period based on two recovered projectile points. Both of these points have broad temporal ranges. Large expanding-stemmed projectile points are noted at the FCMR (Charles et al. 1999b: II.4). Comparisons with these projectile points suggest that this type of projectile point may more appropriately date to the Middle Ceramic period.

5EP2920.1a This is a small, unnotched triangular Projectile points in Category P48 (Lintz and Anderson 1989:170), which is dated from A.D.500-A.D.1400, best resemble this specimen. A similar projectile point (Type IA) has been collected (Alexander et al. 1982:90) at the FCMR. Lintz and Anderson(1989:171) suggest that these projectile points are more common from A.D.1000-A.D.1400.

Fremont County

5FN1578.1a (Figure 7.2d). This specimen is a large expanding-stemmed projectile point made from yellow-brown silicified wood. Most of the base and one shoulder are missing. This point has a broad triangular blade with slightly convex edges, a sharp tip, an extending barbed shoulder, a slightly expanding base, and a bi-convex cross-section. Based primarily on the broad blade and the extending barbed shoulder, specimens in Category P42 (Lintz and Anderson 1989:160) best resemble this projectile point. This projectile point type dates from A.D.600-A.D.1600. This projectile point is similar to other projectile points from the FCMR, such as Type 14 (Zier 1989:141) and Class IV/V (Alexander 1982:100). These comparisons suggest that this projectile point dates to the Early to Middle Ceramic periods.

5FN1580.1a (Figure 7.2e). This project is a small flange-stemmed point manufactured from a dark grayish brown chert. This triangular specimen is complete. Characteristics include a triangular blade with slightly convex edges, a very sharp tip, abrupt shoulders, a straight-flanged stem, rounded tangs, a slightly convex base that is wider than the blade, and a bi-convex cross-section. The point clearly resembles those in Category P83 (Lintz and Anderson 1989: 217), which date from A.D.650-A.D.1650. Small flange-stemmed projectile points are documented at the FCMR as well (Charles et al 1999b: Appendix II, Kalasz et al. 1993:64-Type 5, and Zier et al. 1988:125-Type I). These comparisons indicate that this projectile point most likely dates to the Late Early Ceramic to the Middle Ceramic period.

5FN1582.1d. This artifact is a small contracting-stemmed projectile point and is made from a red and gray chert. The tip of the blade is missing. This triangular point has straight blade edges, weakly barbed shoulders, a very short contracting stem, rounded tangs, a convex base, and is plano-convex in cross-section. The point is extensively flaked on one side with very little modification on the other. Specimens from Category P75 (Lintz and Anderson 1989:208) resemble this projectile point. These projectile points date from A.D.800-A.D.1450. No similar examples of this type were noted in a review of reference materials from the FCMR.

5FN1588.1a. This projectile point is a large, expanding stemmed point manufactured from tan and red chert. This projectile point is missing portions of several attributes including the blade tip, one shoulder, and the very tip of one tang. This specimen has a broad triangular blade with slightly convex edges, rounded shoulders, a slightly expanding stem with a broad neck, pointed tang, a convex base, and a bi-convex cross-section. Specimens in Category 42 (Lintz and Anderson 1989:160), particularly specimen N, best resemble this projectile point. This category is dated from A.D.600-A.D.1600 (Lintz and Anderson 1989:160). This projectile point is similar to other documented points at the FCMR, such as Type 14 (Zier 1989:141) and Class IV/V (Alexander et al. 1982:100), but the major difference is the rounded tang. The comparisons suggest that this projectile point dates to the Early to Middle Ceramic periods.

5FN1589.1a. This artifact is a large stemmed point made from red and black chert. This point is missing the tip, one shoulder, and both tangs. This projectile point has a broad and triangular blade with straight edges, a barbed tang, and a bi-convex cross-section. The remaining portion of the stem is broad and short. The fragmentary nature of this artifact prevents adequate comparisons to other projectile points from the FCMR.

5FN1592

Nine projectile points were collected from this site. The artifacts vary from nearly complete to fragmentary and unidentifiable.

5FN1592.1a. This specimen is a large stemmed projectile point manufactured from white and tan chert. The point is missing the tip of the blade. One edge of the blade has not been finished. This edge has the remnant of a bulb of percussion. The broken tip may have been a factor in the unfinished nature of this artifact. Despite this, the point has some observable attributes which include weakly barbed shoulders, a broad and slightly expanding stem, rounded tangs, a convex base, and a bi-convex cross-section. The closest match to this projectile point are specimens in Category P19 (Lintz and Anderson 1989: 184). Specimens from Category P19 dates between 2000B.C.-A.D.1000. This comparison is based primarily on the stem and shoulders. No similar comparisons were noted in a review of research material from the FCMR.

5FN1592.1b (Figure 7.3a). This projectile point is a small expanding stemmed point made from white and red chert. The tip of the blade and one tang are missing. This point has a long and narrow blade with straight blade edges, slightly barbed shoulders, a short expanding stem, a pointed tang, and is bi-convex in cross-section. From what remains of the base, it appears to be slightly convex. Specimens from Category P58 (Lintz and Anderson 1989: 184) resemble this artifact. This category dates from A.D.600-A.D.1200 (Lintz and Anderson 1989: 184). No similar comparisons were noted in a review of research material from the FCMR.

5FN1592.1c. This specimen represents a large stemmed, unfinished projectile point made from orthoquartzite. The tip is missing, both blade edges are broken, and it appears that the distal end of the base is not completely finished. Cortex is present on the base. The shoulders are abrupt, the stem is straight to slightly expanding, and it is plano-convex in cross-section. Because the projectile point is unfinished, it is not possible to make adequate comparisons.

5FN1592.1d (Figure 7.3b). This projectile point is a large stemmed projectile point that is manufactured from yellow brown chert. The artifact has been heat-treated, giving it a red color, but the broken edge of the blade reveals the original color. The majority of the blade is missing, having snapped off just above the shoulders, and one shoulder is also missing. Physical characteristics include a broad blade, a barbed shoulder, rounded tangs, and a bi-convex cross-section. The point has a broad, short, and slightly contracting stem. The characteristics of the stem, in conjunction with the barbed shoulder, hinder the making of adequate comparisons.

5FN1592.1e. This specimen is a projectile point fragment made from white chert with red veins. The point is too fragmentary to make comparisons. Portions of one blade and a portion of the stem are all that remain. This artifact may have been broken during manufacture. The remaining portion does not appear sufficiently thinned.

5FN1592.1f (Figure 7.3c). This large stemmed projectile point fragment was made from dark-brown chert. The point is too fragmentary to make adequate comparisons, because too many elements are missing. This artifact has a few discernable characteristics including a straight blade edge, a barbed shoulder, and a slightly expanding stem. The proximal end of the base is broken; therefore, the shape is not determined.

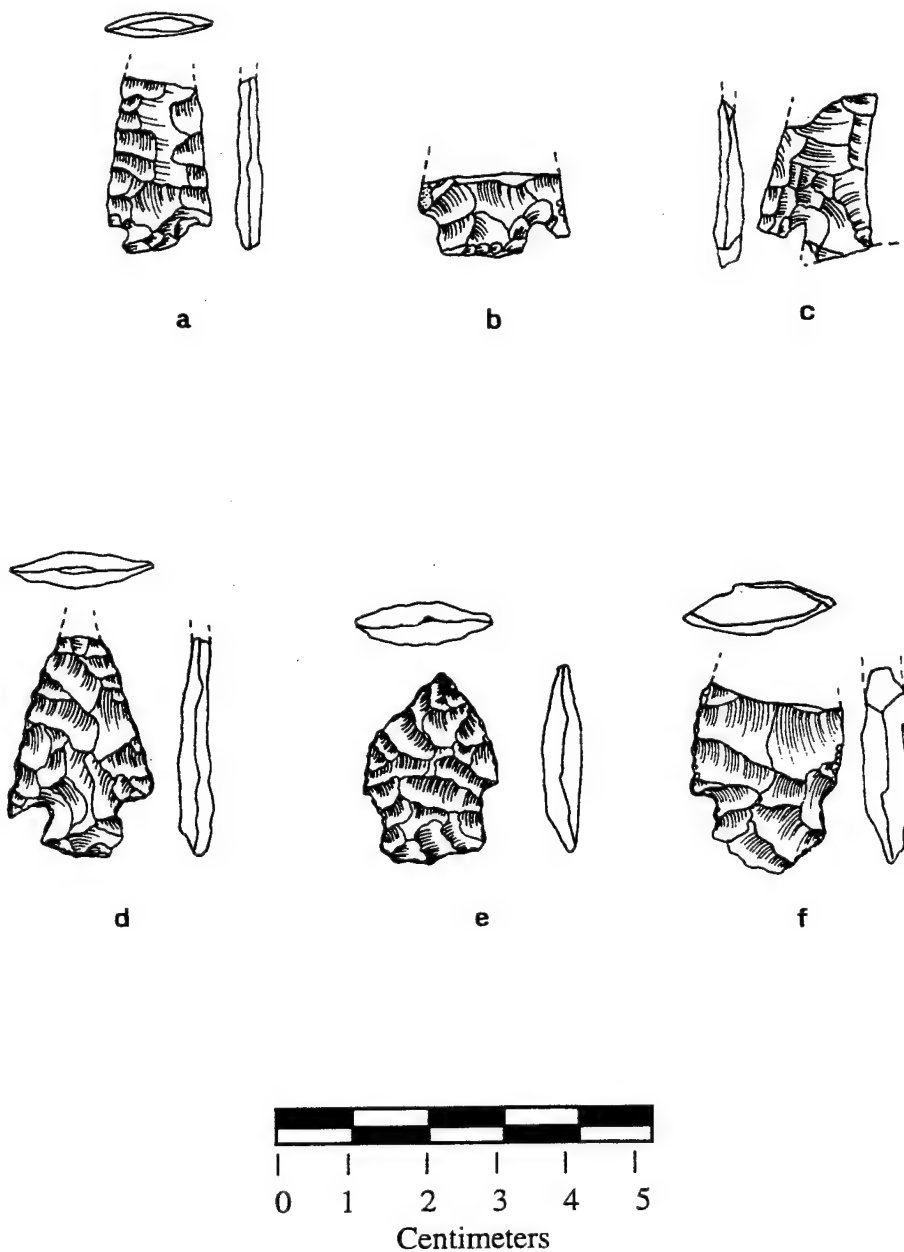


Figure 7.3 Projectile Points, 5FN1592, Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR.
a (5FN1592.1b), b (5FN1592.1d), c (5FN1592.1f), d (5FN1592.1g), e (5FN1592.1h), f (5FN1592.1i).

5FN1592.1g (Figure 7.3d). This nearly complete point is a large stemmed projectile point manufactured from yellow brown silicified wood. The very tip of the blade is missing. This projectile point has a triangular blade with straight to slightly convex edges, barbed shoulders, a slightly expanding stem, pointed tangs, a slightly convex base, and a bi-convex cross-section. This specimen compares favorably to those of Category P42 (Lintz and Anderson 1989: 160), which dates from A.D.600-A.D.1600. Specimens in Category P26 (Lintz and Anderson 1989: 142) have numerous similarities and date to an earlier time period, 1000 B.C.- A.D.500, but specimens in Category P26 exhibit rounded as opposed to pointed tangs. Lintz and Anderson (1989:143) also suggest that Category P26 may persist as late as A.D.1400. One projectile point classified as Type 13 (Zier 1989:140) from the Recon John Shelter (5PE648) represents a similar point for the FCMR. This type was given a tentative date of 500 B.C.-A.D.1000 (Zier 1989:140). These comparisons suggest that this projectile point may date from the Late Archaic to the Middle Ceramic period.

5FN1592.1h (Figure 7.3e). This specimen is a large expanding stemmed projectile point made from white chert. The point is nearly complete missing only the very tip of the blade. The artifact has a broad triangular blade with convex edges, rounded shoulders, a broad expanding stem, slightly pointed tangs, a slightly convex base, and a bi-convex cross-section. The closest match to this artifact are those in Category P24 (Lintz and Anderson 1989: 140), which are slightly similar and date from 3000 B.C.- 200 B.C. Examples of other similar projectile points were not found in the reference material for the FCMR.

5FN1592.1i (Figure 7.3f). This projectile point is a large stemmed projectile point and is manufactured from light-brown chert. The artifact is missing the tip of the blade element. The point has a broad blade with convex edges, abrupt shoulders, a slightly expanding base, rounded tangs, a convex base, and a bi-convex cross-section. This point resembles those from Category P24 (Lintz and Anderson 1989: 140), which date from 3000B.C.-200 B.C. The Type 10 projectile point, from the Recon John Shelter, is also a close match (Zier 1989:139). These comparisons suggest that this projectile point may date to the Middle to Late Archaic periods.

5FN1600.1a (Figure 7.4a). This projectile point is a large stemmed point manufactured from yellow-brown silicified wood. The point is an isolated find that is missing the tip of the blade and one tang. Characteristics include a large, broad and triangular blade with convex edges, extended barbed tangs, which creates a deep notch, a pointed tang, and a bi-convex cross-section. The best comparison to this artifact from the FCMR is Type 9 from the Recon John Shelter (Zier 1989:133). There are some similarities to specimens in Category P23 (Lintz and Anderson 1989:140) and Category P26 (Lintz and Anderson 1989:142) although the comparisons are not conclusive. These projectile points date from the Middle Archaic to the Early Ceramic period.

5FN1612.1a. This point also represents an isolated find. This projectile point is a large expanding-stemmed point made from tan chert. The artifact is missing one tang and one shoulder. The point has a sharp tip, a broad triangular blade with convex edges, a barbed shoulder, a broad expanding stem, a pointed tang, a convex base, and a bi-convex cross-section. Specimens from Category P30 (Lintz and Anderson 1989:147) resemble this projectile point and they date from 1000 B.C. - A.D.1000. There are no good comparisons in the reference material from the FCMR.

Pueblo County

5PE2940.1a (Figure 7.4b). Two projectile points were collected from this site. The first projectile point is a small triangular-stemmed point with a small straight-flange manufactured from white chert. The very tip of the blade and the very tip of one tang are missing, otherwise it is nearly complete. Characteristics include straight to slightly convex blade edges, abrupt shoulders, straight flange stem, pointed tangs, a slightly concave base, and a bi-convex cross-section. Specimens in Category P83 (Lintz and Anderson (1989:217), which resemble this specimen, date from A.D. 750- A.D.1650. Similar stemmed projectile points are noted at Fort Carson (Charles et al. 1999b: Appendix II). This point type appears to date from the Late Early Ceramic to the Late Prehistoric periods.

5PE2940.1b (Figure 7.4c). The second point from this site is a small expanding stemmed projectile point, that is manufactured from tan chert. The very tip of the blade element and the very tip of one tang are missing. This point has excurvate-incurvate (fishtail) blade edges, lacks shoulders, has pointed tangs, a concave base, and is bi-convex in cross-section. A similar match for this projectile point was not found in the point type classification for the PCMS established by Lintz and Anderson (1989). The closest morphological comparison is specimen L in Category P16 (1989:130), which is twice as large, and this specimen

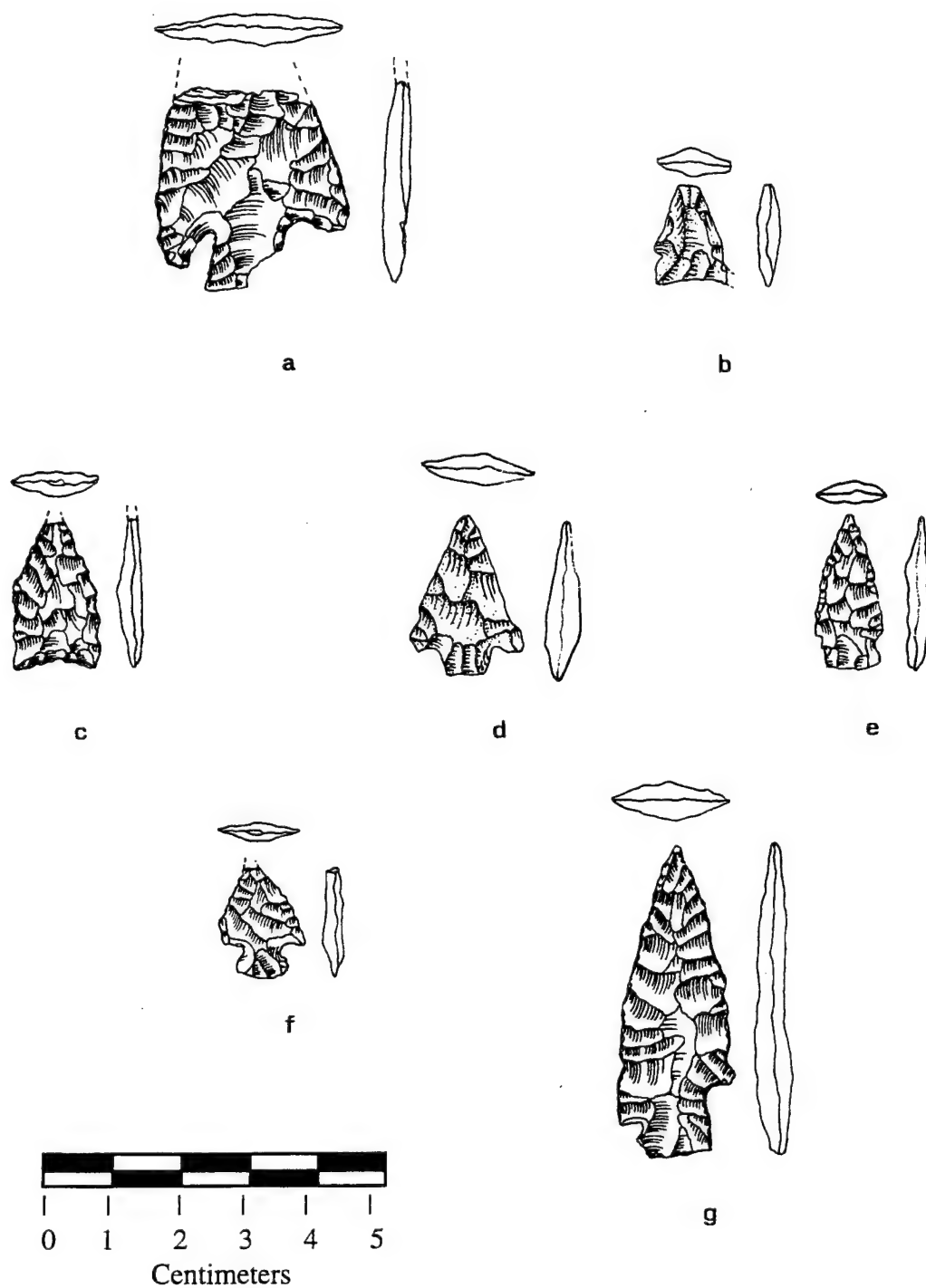


Figure 7.4. Projectile Points, Fremont and Pueblo Counties, Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR. a (5FN1600.1a), b (5PE2940.1a), c (5PE2940.1b), d (5PE2968.1a), e (5PE2975.1b), f (5PE2980.1a), g (5PE3010.1a).

is undated. The projectile point bases from specimens in Category P51 (Lintz and Anderson 1989:176) are similar, and these projectile points date from A.D. 1200-A.D. 1725. Although the base and shape are similar to Category P51, this projectile point is smaller with more pointed tangs and a more pronounced concave base.

Two projectile points were collected from site 5PE2940. This open structural site possesses architecture similar to other FCMR sites, Avery Ranch (5PE56), Mary's Fort (5PE649), and Ocean Vista (5PE868), that have radiocarbon dates that place them in the Early to Middle Ceramic periods (Zier et al 1997:II.19-21). Therefore, this site may well date from the Late Early Ceramic to the Middle Ceramic periods.

5PE2945.1a. This projectile point is a small stemmed point made from yellow-brown silicified wood. The projectile point has a triangular shape. Portions of both shoulders and tangs are missing, but there is enough of the stem to indicate that it is slightly expanding. Other discernable characteristics include a sharp point, a triangular blade with slightly convex edges, barbed shoulders, a slightly expanding stem, and a bi-convex cross-section. Projectile points in Category P62 in Lintz and Anderson (1989:193), which date between A.D. 500-A.D. 1400, resemble this specimen. Similar projectile points are noted at the Recon John Shelter and are identified as Type 14 (Zier 1989:141). These comparisons suggest that this projectile point dates to the Early to Middle Ceramic periods.

5PE2966.1b. This projectile point, made from the local orthoquartzite, was too fragmentary to classify by type. The point has been bifacially thinned and is stemmed. The tip of the blade element, one shoulder, and both tangs are missing. Part of the stem and one barbed shoulder remain. The point may have broken during use, based on the long step fracture on one side of the blade next to where the tip broke. It is a small straight-stemmed point manufactured from a red, possibly heat-treated, orthoquartzite. The point is triangular with a short stem. This specimen is considered complete even though the very tip of one of the shoulders is missing. Characteristics of the artifact include a sharp point, a triangular blade with straight edges, barbed shoulders, a short and narrow straight stem, rounded tangs, a straight base, and a bi-convex cross-section. Projectile points in Category P52 (Lintz and Anderson 1989:177) and Category P53 (Lintz and Anderson 1989:178), which date from A.D. 700-A.D. 1350, closely resemble this specimen. Type 2 (Kalasz et al. 1993:62) and Type 14 (Zier 1989:141) projectile from the FCMR are similar to this specimen. Type 14 (Zier 1989:141) projectile points from Recon John Shelter are associated with Temporal Group 3, the Early Ceramic period. These comparisons suggest that this projectile point dates from the Early to Middle Ceramic periods.

5PE2975.1b (Figure 7.4e). This projectile point is a small stemmed point made from chalcedony. The point is complete and has a narrow, elongated triangular shape. This specimen has a very sharp tip, sharp and slightly convex blade edges, rounded shoulders, a slightly expanding stem, a straight base, and a bi-convex cross-section. Projectile points in Category P69 (Lintz and Anderson 1989:203) resemble this artifact and date from A.D. 950-A.D. 1750. The shape is similar, but other characteristics differ. The four specimens in Category P69 are stemmed bifaces that were modified into drills based on twisting tip fractures and reworked blade edges (Lintz and Anderson 1989:203). Projectile point 5PE2975.1b has none of those characteristics. It is possible that these broken specimens were used as projectile points prior to being used as drills. Comparable points are not noted in a review of literature on the FCMR.

5PE2980.1a (Figure 7.4f). This specimen is a nearly complete, small expanding-stemmed projectile point manufactured from yellow-brown silicified wood. This triangular-shaped projectile point is missing the very tip of the blade, the very tip of one shoulder, and a small portion of one tang. This projectile point has sharp and slightly convex blade edges, barbed shoulders, an expanding stem, a convex base, and a bi-convex cross-section. Projectile points in Category P74 in Lintz and Anderson (1989:206), which date to A.D. 600-A.D. 950, closely resemble this artifact. This point also bears a close resemblance those specimens in Category P62 (Lintz and Anderson 1989:193), which date to a similar time period although slightly later (A.D. 500-A.D. 1400). The primary difference between these two categories is that specimens in Category P62 have straight bases, as opposed to the slightly convex base found in Category P74. Projectile points in Category P58 (Lintz and Anderson 1989:184), which date to A.D. 400-A.D. 1400, are similar although slightly larger than those in Category P74. Two similar projectile points (Alexander 1982:Figure 4.2u and Charles 1999b:Figure II-5c) are documented from the FCMR. These comparisons suggest that specimen, 5PE2980.1a, dates at least to the later part of the Early Ceramic period and possibly into the Middle Ceramic period.

5PE3010.1a (Figure 7.4g). This projectile point is a large stemmed point made from gray chert. The point is complete, with

shoulders that are notably asymmetrical. This point has a sharp tip, a long narrow blade with convex edges, abrupt and asymmetrical shoulders, a slightly expanding stem, rounded tangs, a straight base that is not perpendicular to the blade, and a plano-convex cross-section. The point is extensively flaked on one side, with very little modification on the other. No similar projectile /points are present in references from previous work at the FCMR. The closest match to a projectile point is a single specimen in Category P39 (Lintz and Anderson 1989:158), which is an undated type.

Scrapers Ten flaked-lithic tools were identified as scrapers (a functional classification) based on observed characteristics. These artifacts were recovered from seven prehistoric sites. No isolated occurrences of scrapers were recorded. All but one of the sites with scrapers are typed as prehistoric open sites lacking features. The only site that is not representative of this site type is 5PE2940, which is a prehistoric open structural site. Six of the ten scrapers are from three sites, indicating these types of artifacts are representative of specific activities that occurred at these locations. These tools were examined in accordance with Dean (1992) and were size sorted. The results of the analysis are presented in Table 7.4. The angle of the beveled edge of the scrapers was measured using a goniometer. The angle listed in the table is the average of several measurements along the beveled end of the scraper. The relatively flat and ventral side of the scraper represents 0°. The angle of the bevel is the angle between the plane of the ventral surface and the angle of the beveled edge. A 90° angle is a right angle to the ventral surface.

Based on the analysis, several inferences can be made. As with other tool types, chert is the raw material of choice, accounting for 60% of all raw material types in this assemblage. The chert occurs in several colors including white, gray, brown, and red-brown. Some of the cherts most likely occur locally, while others may have been brought in from relatively close sources such as the foothills. No scrapers were made from orthoquartzite, which is another common raw material type at the FCMR. Three scrapers are made from silicified wood and one from quartzite complete the assemblage.

Three of the scrapers are broken, and the cultural modification continues to the edge where the break occurred. Seventy percent of the scrapers had at least some cortex remaining on the dorsal surface. This suggests that suitable flakes for scrapers were selected during early stages of core reduction. The average angle falls between 105° and 116°, which is 15° to 26° from being at a right angle to the ventral surface. Two of the scrapers (5FN1582.1e and 5PE2975.1c) are illustrated in Figure 7.1c and 1d. These artifacts are good examples of beveled scrapers.

The scrapers are all relatively small, with only one specimen larger than 1". The other nine fall between ½" and 1". All ten scrapers have evidence of use wear. Five of the scrapers are modified on the beveled end of the scrapers, and the other five are modified along one or both lateral edges away from the beveled area, which suggests that these scrapers may have been used for a variety of activities including cutting. These modifications include unimarginal retouching on three of the artifacts and bimarginal retouching on the other two.

Drills Three drill fragments were examined. The first drill discussed is a nearly complete specimen from 5FN1584, a prehistoric open site lacking features and of undetermined age. This artifact (5FN1584.1c) is manufactured from a multicolored chert and is missing the tip of the bit or distal end. The proximal end and widest part of the drill has a slightly concave base. Two slight notches just above the base on either side of the lateral blade edges may represent a hafting element. The drill is 33.4 mm long, 12.6 mm wide, 6.4 mm thick, and weighs 3.1 grams. The beginning of the blade is thicker than the stem. The blade expands gradually from the tip towards the proximal end. The blade edges are bifacially worked, and there is minor evidence of use wear near the tip. This blade element has a twisted bi-convex shape in cross-section.

The other two specimens are drill blade fragments. 5EP2942.1a, an isolated find, represents the medial portion of a red chert drill bit with the distal and the proximal ends missing. The fragment is 21.6 mm long, 10.1 mm wide, 3.9 mm thick, and weighs 1.1 grams. The lateral edges are bifacially worked and the fragment is bi-convex in cross-section. The edges have some small step fractures, which suggests use wear. The third specimen, 5PE2966.1c, is the very tip of a red and white chert drill bit from an prehistoric open site lacking features of undetermined age. The fragment is 17.6 mm long, 7.0 mm wide, 3.5 mm thick, and weighs 0.4 grams. This specimen is plano-convex in cross-section. The blade tapers slightly towards the tip, which is dull. No evidence of use wear was detected at the tip or along the blade edges.

Table 7.4. Scrapers Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Catalog Number	Raw Material	Broken	Weight (gm)	Cortex	Angle	Size
5EP2922.1a	Silicified Wood	Y	1.6	0	115	2
5EP2922.1b	Chert	N	8.1	0	107	2
5FN1578.1d	Quartzite	N	22.1	1	113	3
5FN1582.1e	Chert	N	11.6	1	106	2
5PE2940.1d	Silicified Wood	N	16.1	1	111	2
5PE2940.1e	Silicified Wood	N	10.1	1	106	2
5PE2949.1b	Chert	Y	4.9	0	116	2
5PE2970.1c	Chert	N	9.9	2	116	2
5PE2975.1a	Chert	Y	5.1	2	109	2
5PE2975.1c	Chert	N	13.1	1	105	2
Average			10.26		110.4	

KEY

Cortex:

0 - Absent

1 - < 50%

2 - > 50%

Size

1= 0-1/2"

2= 1/2-1"

3= 1-1 1/2"

4= 1 1/2-2"

Spokeshave A spokeshave was collected from 5PE2954, a prehistoric open site lacking features and of undetermined age. The artifact (5PE2954.1d) is made from orthoquartzite, and it is broken. A broad, bifacial notch along one edge forms the spokeshave. The notch is 12.6 mm wide and 3.9 mm deep. The unbroken edge opposite the notch has unifacial use wear. The flake tool weighs 3.6 grams and is a Grade 2 flake.

Unpatterned Flake-lithic Tools

A total of thirty-one unpatterned flake tools was collected during the 1998 survey of selected areas within the FCMR. The flake tools discussed here consist of unpatterned flake tools such as retouched and utilized flakes. Three of these artifacts are isolated finds (5FN1615, 5PE3000, 5PE3012), while the remaining twenty-eight are from twenty-one sites. The majority of the artifacts are from prehistoric open sites lacking features. One artifact each is from the two recorded prehistoric open structural sites (5PE2940, 5PE2964), and two are from prehistoric sheltered sites (5FN1592, 5PE2963). The retouched and utilized flakes were classified following the standards in Dean (1992). Additionally, they were sorted by size. The results of this classification are presented in Table 7.5.

Based on this general analysis and observations, several inferences can be made. First, chert is the raw material of choice, accounting for 61% of the material types in this assemblage. The chert occurs in a variety of colors, some of which are local and others of which were imported. Orthoquartzite, which commonly outcrops with sandstone at the FCMR, represents 23% of the total number of raw material types. Chert and orthoquartzite, most of which are locally available, represent over 80 percent of all flake tools. Single occurrences of quartzite, basalt, rhyolite, and two silicified wood flakes complete the material type assemblage.

Second, slightly over half (55%) of the flake tools are broken. In all but two cases, the culturally modified edge continues up to a break on the edge of the flake, suggesting that the lateral margin of the flake may have broken during use, as opposed to having been utilized after being broken.

Third, two-thirds of the flake tools have at least some cortex remaining on the dorsal surface. Only one of the flake tools is a decortication flake. The presence of higher percentages of cortex on these tools indicates flakes from earlier stages of reduction were in general used more frequently, perhaps due to the fact that flakes from earlier stages of reduction can be somewhat larger.

Fourth, very few (6) of the flake tools do not exhibit evidence of use wear. Four of these are unbroken flakes and may not have been used after having been retouched. Two of the tools were utilized and not retouched. Determining utilization in the field is difficult, and undoubtedly some utilized flakes were misidentified and therefore were not collected. Of those flake tools exhibiting retouching, 63% are unimarginally retouched. Only one tool had both unimarginal and bimarginal retouching on the opposite lateral edges of a single flake. The highest percentage (58%) of flake tools fall within the $\frac{1}{2}$ " – 1" range, with just over one-third larger than 1".

MISCELLANEOUS NON-FLAKED STONE TOOLS

Cores/Core Tools

Four artifacts are present in this artifact class. One artifact is a core fragment, and the other three artifacts are core tools. One core, 5EP2933.1b, an obsidian core fragment, was found with an obsidian biface fragment. Cores are not normally collected, but obsidian is rare at the FCMR; therefore, it was collected. Visually, both isolated artifacts appear to be from the same material source. A small amount of cortex remains on the core fragment. The core fragment does not appear to have been extensively used after it was separated from the main core. It appears that two flakes were removed bidirectionally. The core fragment weighs 16.7 grams and measures 37.3 mm x 34.3 mm x 14.1 mm. The first core tool (5EP2920.1d) is from a prehistoric open site lacking features that tentatively dates to the Middle Ceramic period, based on one observed projectile point. This artifact is a large tabular piece of limestone that has been modified along one edge. Five relatively large flakes were unifacially struck off along this edge, forming a chopping tool. This edge also exhibits bimarginal use wear. Over 50% of the cortex remains. This specimen represents an expedient tool that was probably used soon after

Table 7.5. Unpatterned Flaked-lithic Tools Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Catalog Number	Raw Material	Broken	Weight (gm)	Cortex	Wear	Retouch	Size
5EP2909.1a	Orthoquartzite	N	50.7	2	0	1	4
5EP2913.1a	Basalt	N	20.7	1	1	1	3
5EP2914.1b	Orthoquartzite	N	36.8	0	0	1	4
5EP2916.1a	Chert	Y	7.1	2	1	1	2
5EP2916.1b	Chert	N	17.6	1	1	0	3
5EP2916.1c	Chert	Y	2.0	1	1	1	2
5EP2922.1c	Chert	Y	7.9	1	2	2	2
5EP2923.1a	Chert	Y	14.4	1	1	1	3
5FN1578.1e	Chert	Y	1.9	0	2	0	2
5FN1578.1f	Chert	Y	4.5	0	1	1	2
5FN1582.1f	Orthoquartzite	Y	91.2	1	1	3	4
5FN1586.1a	Orthoquartzite	N	3.5	0	1	2	2
5FN1586.1b	Orthoquartzite	N	34.7	1	1	2	4
5FN1592.1j	Silicified wood	N	4.9	1	2	2	2
5FN1595.1b	Chert	Y	1.6	0	1	1	1
5FN1601.1a	Orthoquartzite	Y	19.9	0	1	1	4
5FN1615.1a	Chert	Y	1.2	1	1	1	2
5PE2940.1f	Silicified wood	Y	6.4	1	2	1	2
5PE2946.1b	Orthoquartzite	Y	35.3	1	0	1	4
5PE2956.1g	Quartzite	N	11.4	1	1	1	2
5PE2962.1b	Chert	Y	1.0	0	2	1	2
5PE2963.1a	Chert	Y	0.9	0	0	2	2
5PE2964.1a	Chert	N	11.9	2	1	0	2
5PE2965.1e	Chert	N	4.5	2	0	1	2
5PE2965.1f	Chert	N	3.5	2	2	1	2
5PE2965.1g	Chert	N	10.6	2	1	1	3
5PE2965.1h	Rhyolite	Y	6.5	2	2	1	2
5PE2970.1b	Chert	Y	9.1	0	1	2	2
5PE2985.1c	Chert	N	22.9	0	1	2	3
5PE3000.1a	Chert	Y	3.9	2	1	2	2
5PE3012.1a	Chert	N	0.6	1	0	1	1

Average

14.5

KEY

Cortex

0 - Absent
1 - < 50%
2 - > 50%

Wear

0 - Absent
1 - Unimarginal
2 - Bimarginal
3 - Both

Retouch

0 - Absent
1 - Unimarginal
2 - Bimarginal
3 - Both

Size

1= 0-1/2"
2= 1/2-1"
3= 1-1 1/2"
4= 1 1/2-2"

manufacture. The artifact measures 123.6 mm x 84.2 mm x 36.9 mm, and weighs 454 grams.

The second core tool (5FN1582.1g) is from a prehistoric open site lacking features that tentatively dates to the Early to Middle Ceramic periods, based on one projectile point. This artifact is manufactured from local orthoquartzite and provides a good example of a core tool. The artifact is illustrated in Figure 7.1e. It has multi-directional flake scars and a small amount of cortex. The core is extensively flaked along one edge, which creates a bifacially worked edge for use as a chopper or cutting tool. One side is more extensively modified, and there is minor bimarginal use wear. The artifact measures 83.1 mm x 54.9 mm x 34.2 mm, and weighs 209.7 grams.

The third core tool (5PE2956.1l) is from a prehistoric open site lacking features that is of undetermined age. The artifact is manufactured from local orthoquartzite and has slightly less than 50% of the cortex remaining, which is all on one side of what was a tabular piece. The core has been bidirectionally flaked. One edge of the core has been unifacially retouched, creating a cutting edge. This edge has evidence of bimarginal use wear. This specimen measures 117.9 mm x 80.7 mm x 58.6 mm, and weighs 581 grams.

Hammerstones

Four hammerstones were collected from the inventory. The first specimen (5PE2946.1a) is from a prehistoric open site lacking features that is of undetermined age. The artifact is a water-worn chert pebble, which exhibits battering on one end. This unusually smooth pebble was definitely transported to the site.

Two of the hammerstones are from site 5PE2956, and both are utilized nodules of quartzite. This site is a prehistoric open site lacking features, with a historic road through it. The prehistoric component is of undetermined age. The smaller hammerstone (5PE2956.1a) has little remaining cortex. Flakes have been removed over much of the surface giving it a smoothed angular appearance. Battering is quite apparent around one margin of the artifact, which is also where the striking platform for the removal of the majority of flakes is located. Battering most likely caused the removal of some of the flakes by spalling. The artifact measures 67.8 mm x 62.7 mm x 47.7 mm, and weighs 246.6 grams. The other hammerstone (5PE2956.1b) from this site is a tabular piece of quartzite with over 50 percent of the cortex remaining. A few flakes have been removed along one margin. Battering is evident along one edge of the artifact. This hammerstone measures 86.1 mm x 79.7 mm x 45.3 mm, and weighs 390.3 grams.

The fourth hammerstone (5PE3007.1a) is an isolated find. The artifact is a large water-worn, igneous cobble that is bluntly pointed at one end and is wider on the other end (Figure 7.5.). Heavy battering is present on the wide end of the artifact with minor battering on the pointed end. The artifact is described as a hammerstone but maul or pounder may be a more accurate interpretation. This specimen measures 182.5 mm x 76.5 mm x 49.8 mm, and weighs 1147 grams.

DEBITAGE

The following section summarizes data collected during the field and laboratory analysis for the 1998 project. Debitage tables are included with the individual site descriptions in Appendix III. Interpretations of individual site assemblages are included in Appendix III as well. The reader is referred to the site descriptions for specific information.

Chi-square tests were run on the flake assemblages from 10 sites with 95 or more flakes. We used chi-square tests to compare flake characteristics of size, material type, and flake type. A composite table of the chi-square results is presented in Table 7.6.

The chi-square test establishes whether the observed values deviate significantly from the expected values, regardless of the population number within each category. The chi-square test gives expected values to each actual value individually, within its own cell.

Five sites demonstrate significant differences between size and material type. These sites are 5EP2915, 5FN1578, 5FN1588, 5FN1592, and 5FN1595. At site 5FN1588, for example, there is a high percentage of Size Grade 1 (> ½")

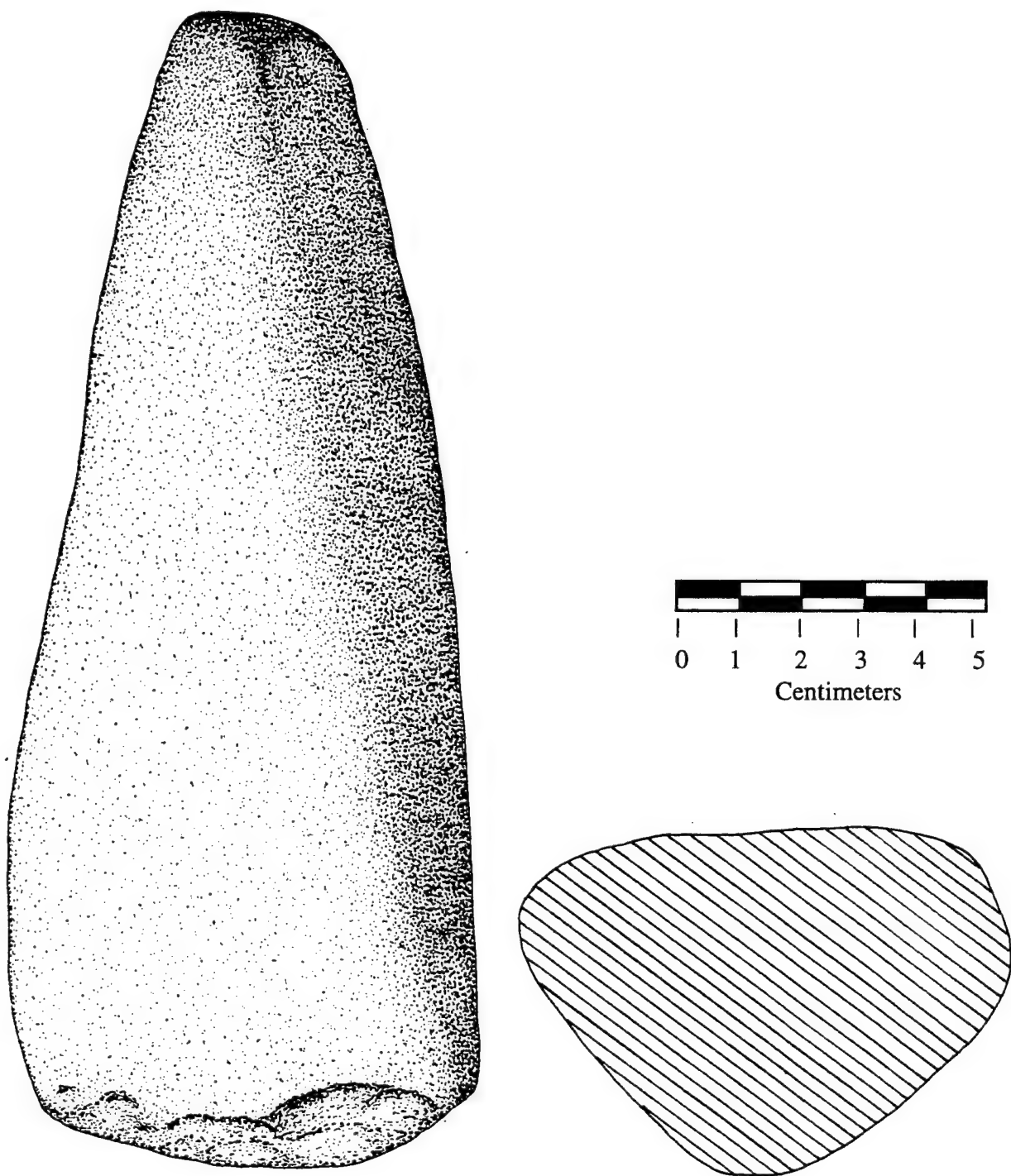


Figure 7.5

Maul, 5PE3007.1a, Collected by Fort Lewis College, 1998 Archeological Inventory, FCMR.

Table 7.6. Chi-square Results for Flaked-lithic Debitage Recorded by Fort Lewis College, 1998 Archaeological Inventory, FCMR.

Site Number	Size by Material Type				Flake Type by Material Type within Size Grades							
	Size Grade 1				Size Grade 2				Size Grade 3			
	total flakes	df	x2		total flakes	df	x2		total flakes	df	x2	
5EP2915	152	10	19.828		80	10	29.619		63	10	22.251	
5EP2917 Q	149	2	1.413		124	4	2.863		*	2	0.846	
5EP2920	99	10	4.334		83	15	18.319		1	4	2.333	
5EP2924 Q	142	2	6.143		116	*	*		6	2	0.451	
5FN1578	150	10	40.759		96	8	45.256		5	6	6.496	
5FN1588	115	10	32.944		85	8	13.822		3	8	9.027	
5FN1592	150	10	29.725		54	6	19.952		25	8	9.546	
5FN1595	97	6	13.942		63	6	6.32		4	2	5.867	
5PE2980	103	10	5.523		57	10	11.617		13	6	12.117	
5PE625	113	10	5.137		39	8	10.676		17	10	5.974	

* a chi-square test could not be performed between the variables

Q quarry sites

shaded areas indicate the chi-square test at the .05 level of significance has rejected the null hypothesis.

Key:

Size Grade 1=0-1/2"

Size Grade 2=1/2"-1"

Size Grade 3=1-1 1/2"

orthoquartzite and chert flakes.

Three sites (5PE2915, 5FN1578, and 5FN1592) demonstrate a significant difference between material types and flake types within Size Grade 1. These sites indicate that within Size Grade 1, material types differ with respect to flake type. For example, on site 5EP2915 there is a high percentage of chert complex flakes and quartzite shatter flakes. Site 5EP2915 demonstrates a significant difference between material type and flake type within Size Grade 2 ($> \frac{1}{4}$ "). None of the statistical tests ran on Size Grade 3 ($< \frac{1}{4}$ ") artifacts demonstrated any significant difference.

Two sites that showed no significant difference are quarry sites. This is expected because the material type will not differ by size grade or by flake type, since there is a single source material.

There are a few known locations for raw materials suitable for lithic-tool manufacture within the FCMR. There are sources of quality chert, chalcedony, silicified wood, orthoquartzite and quartz in the vicinity of the FCMR. The only specific source areas mentioned in the literature include dendritic yellow and red cherts that originate in the Trout Creek Pass quarries in the Arkansas River headwaters (Chambellan et al. 1984), and the Dawson Arkose source located north of Colorado Springs, a source of high-quality silicified wood. Johnson (1961) indicates that there are numerous sources of silicified or petrified wood northeast of Colorado Springs. Within the FCRM, specific raw material sources have been identified at six locations. These include the following: 5PE54, a source of orthoquartzite (Alexander et al. 1982:71); 5PE369, a source area for cherts and chalcedonies (Alexander et al. 1982:85; Zier 1989), 5PE1603 (Zier et al. 1996; Charles et al. 1999b); a source of orthoquartzite and silicified wood; 5PE1814, a source of orthoquartzite (Charles et al. 1997); one chert quarry(5EP2917) and one orthoquartzite quarry(5EP2924), both discussed in this volume. Cherts and chalcedonies were noted during the inventory of Booth Mountain, as was a source for green orthoquartzite (Charles et al. 1997:6.76). These outcrops are small, and most material is unsuitable for flaked-lithic tool production. Cherts and chalcedonies can also be found in pebbles eroding from the foothills. Jepson et al. (1992) note that quartzite occurs commonly in areas near Turkey Canyon and the lower reaches of Booth Mountain. Quartz (clear and smoky) occurs in the immediate area of Timber Mountain and portions of Cheyenne Mountain. The quartz is found in deposits eroding from the foothills. The gem and mineral guides discuss St. Peter Dome and Crystal Park regions west of the FCMR as good source areas for both smoky and clear quartz (Johnson 1961; Over 1984). Obsidian occurs rarely at sites from the FCMR, and there are no obsidian sources in the near vicinity.

Two pie charts (Figure 7.6) show the percentage distribution of raw materials for debitage and raw materials for tools. In both instances, chert and orthoquartzite dominate the assemblages. This is to be expected since both of these materials are locally available. The choice of material types for tools varies because there are more material types represented for tools than for debitage. For example, single tools of argillite, siltstone, basalt, and limestone are each represented, while none of these material types are present in the debitage assemblage. On the other hand, quartz is represented in small quantities in the debitage, but it is absent in the tool assemblage.

HISTORIC ARTIFACTS

Eleven historic artifacts were collected from six historic sites during the 1998 inventory. All of the artifacts were recovered from historical homesteading/agricultural-related non-habitation sites. One of the sites (5FN1593) also has a prehistoric component. The historic artifacts analyzed are divided into three materials: glass, metal, and ceramic.

Glass

Whole Bottle Three whole bottles were recovered from sites 5PE2942, 5PE2943, and 5PE2959.

A brown glass bottle was recovered from site 5PE2942. Based on the vertical mold seam, which starts at the heel and extends over the finish, this bottle was made using the Owens automatic bottle machine. The bottle has a wide mouth, an external thread finish, and embossed on the side is CHESEBROUGH MANFG.CO.CD. NEW-YORK. Both the bottle type and the maker reveal that the bottle contained Vaseline. This bottle was manufactured from 1908 to 1955 (Fike 1987: 56).

The bottle found on site 5PE2943 possibly represents a perfume or a scent bottle, based on the size, shape, and the

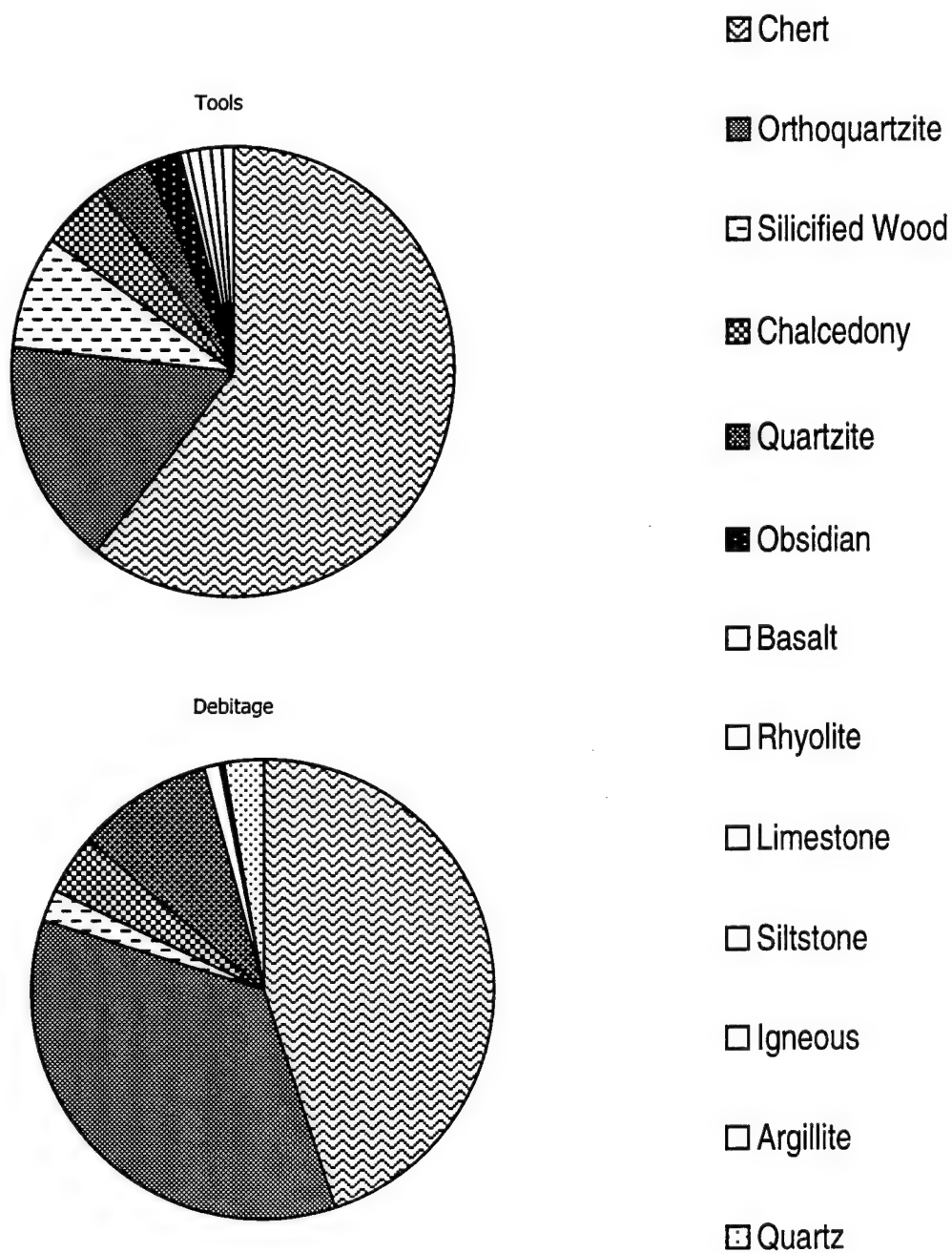


Figure 7.6. Material Types of Lithic Artifacts Recorded by Fort Lewis College, 1998 Archeological Inventory.

molded-diamond pattern on the outside. The clear glass bottle has a maker's mark embossed on the bottom of an I in a circle with a diamond. Owens Illinois Glass Company produced this mark from 1929-1954 (Toulouse 1971: 403).

The third bottle was recovered from 5PE2959. This bottle is clear and was molded using the Owens automatic bottle machine. The finish is a continuous thread. The bottle resembles a squat, square ink bottle with a screw top (Putnam 1965: 60). There is no maker's mark or embossed description on the bottle. This indicates the manufacturer of the product or bottle used paper labels to state their name, company, or contents.

Bottle Fragments Four bottle fragments were found. These included one base fragment with a maker's mark, one panel fragment with embossed words, and two bottle finishes.

The base fragment was from site 5EP2921. This artifact has a maker's mark of A.B.G.M.CO. The maker's mark forms a circle around the base of the bottle. The Adolphus Busch Glass Manufacturing Co. made this mark in their Belleville, Illinois, plant from 1905 until 1929 (Toulouse 1971: 27). The Adolphus Busch Glass Manufacturing Co. bottled beer and soda water.

The second fragment of glass is also from site 5EP2921 and is a small fragment from an indented bottle panel. Embossed on the panel is ROOT...KIDNEY...LIVER...BLA.... The words on the panel probably resemble Dr. Kilmer's swamp root, kidney, liver and bladder cure (Fike 1987: 101). The medicinal purpose of this brand's contents was to cure stomach problems, but this fragment is too partial for an absolute use or date.

One solarized bottle finish was found on site 5EP2910. The manufacturing process of this bottle is unknown. There is too much damage from chipping and melting to discern any type of mold. The finish appears to be a double ring finish. Because of the solarization of the glass, the bottle can be dated prior to World War I.

The other bottle finish was found on site 5PE2942. It is from a brown glass bottle with a reinforced extract finish (Fike 1987: 8). It was made with the Owens automatic bottle machine, which postdates 1903 (Lorrain 1968:44). The word CLOROX is molded twice around the finish of the bottle. The bottle probably contained bleach.

Metal

Two metal artifacts were analyzed. One is a patent label for an automobile. The other is a trading token.

On site 5EP2910 a metal tag for an automobile was found. The tag reads Ford Motor Company Detroit, Mich., USA. It has a series of patent dates in the 1900s, ending with a date of May 26, 1914.

One metal, possibly aluminum, trading token was found on site 5FN1593 (Figure 7.7). The token is in the shape of an octagon and has a hole through the center. The punched hole removed part of a picture on one side and letters on the other side, which gave the location in Colorado where the token originated. No date has been found on this artifact.

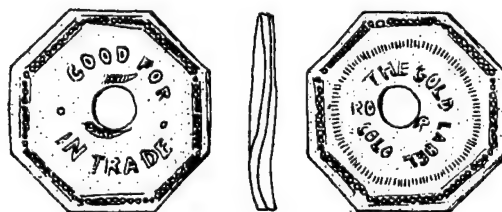


Figure 7.7. Trading Token, 5FN1593, Collected by FLC, 1998 Archeological Inventory, FCMR.

Ceramic

Three ceramic fragments were collected from sites 5EP2921 and 5PE2942. All three have decoration, but only one has a maker's mark.

On site 5EP2921, two ceramics were collected. One whiteware has a transfer-print decoration. The vessel type and maker is unknown. The transfer print is a floral decoration with the colors blue, brown, and yellow on the exterior of the

ceramic. The interior has a white glaze. The other is hand-painted whiteware. A small corner of the artifact is purple, but the actual design element is unrecognizable. The glaze on both sides is white. Both ceramics probably served as tableware.

On site 5PE2942 another whiteware transfer print was found. On one side there is a floral-leaf pattern with green, yellow, and pink on a mostly white glaze. The other side has a maker's mark Tudor Rose on a white-glaze surface. This mark was used in the early 1940s (ca. 1943) by Homer Laughlin China Co. (Kovel and Kovel 1986: 215).

Chapter 8

Management Recommendations

INTRODUCTION

Twenty-three archeological sites are recommended as having the potential to yield significant information on the prehistory and history of the FCMR. Prehistoric site types regarded as not significant and therefore not eligible for nomination to the NRHP (Zier et al. 1997:II-112) include isolated artifacts, isolated non-architectural features, artifact scatters restricted to the surface, sites damaged by natural or man-induced causes to the extent that physical integrity is limited, and hypothesized tool-sharpening grooves. An exception to the above is made by FLC with regards to the hypothetical tool-sharpening grooves. It is not assumed by FLC that these sites are indeed tool-sharpening grooves; moreover, until archeological data corroborates the function of these site types, their function remains hypothetical and speculative. Therefore, *any prehistoric or early historic rock art site* is recommended by FLC as a significant resource, which includes the hypothetical tool-sharpening grooves. Historical site types generally recommended as not eligible for nomination to the NRHP are isolated agricultural sites of the post-1900 period, settlement sites which retain poor integrity (Zier et al. 1997:II-113-114), and human grave sites. No further archeological work is recommended at these sites.

Future direction for those sites evaluated as significant includes the following standard recommendations: sign and avoid, avoid and test, no further consideration, and data recovery (Table 8.1). In cases where the significance of a site is not readily evident from the surface, we have suggested that the site receive limited subsurface investigations, the results of which will allow for informed decisions for future site management. These sites recommended as having the potential to yield significant information to the themes put forth in the CRMP (Zier et al. 1997) are briefly summarized below. More inclusive site descriptions are provided in Appendix III.

5EP2911 - prehistoric sheltered site

This site has a clearly identifiable rock shelter with twenty-six groove marks on the north wall. In the open area directly above the shelter is a stone alignment, the function of which remains inconclusive. The site has moderate bioturbation and deposition; the deposition may be covering significant cultural material. A radiocarbon sample was collected from a deep shovel test. This sample produced a conventional radiocarbon age of 1150 ± 80 B.P. and a two sigma calibrated date range of A.D. 685 to A.D. 1025 (Beta-129181). The site has the potential to yield significant information on the themes of settlement patterns, prehistoric economies, geomorphology, paleoclimate, and chronology and cultural relationships as outlined in the CRMP (Zier et al. 1997). Surface and subsurface evidence clearly indicate that the site is eligible for nomination to the NRHP. Erosion is not an immediate concern and there is a minor potential for military impacts.

5EP2915 - prehistoric open occupation hearth site

The site is exposed on either side of an ephemeral drainage. Although suffering from erosion, two potentially datable hearths retain their integrity. Areas away from the drainage may contain undisturbed cultural deposits. The site has the potential to yield significant information based on the themes of chronology and cultural relationships, prehistoric economies, and settlement patterns outlined in the CRMP (Zier et al. 1997). The site is being actively impacted by a drainage, and the site area is subject to military maneuvers. The surface data suggest a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified. If so, it would constitute the first step in the development of a management plan that could include data recovery.

5EP2917 - prehistoric open site lacking features

The site represents a large flaked-lithic artifact scatter related to prehistoric quarrying activities. The site has the potential to yield significant information on the research themes of prehistoric economies, settlement patterns, chronology and cultural relationships, and technologies as defined in the CRMP (Zier et al. 1997). This site is recommended for permanent site protection. The site is not being impacted by erosion, but avoidable military activity is threatening the site. Due to the large size of the site, fencing is not feasible.

Table 8.1. Management Recommendations for the Sites Recommended as Eligible for Nomination to the NRHP, 1998 Archeological Inventory, FCMR.

Site Number	Site Type	Management Recommendation
5EP2911	Prehistoric Sheltered Site	Sign and Avoid
5EP2915	Prehistoric Open Occupation Hearth Site	Avoid and Test
5EP2917	Prehistoric Open Site Lacking Features	Sign and Avoid
5EP2920	Prehistoric Open Site Lacking Features	Avoid and Test
5EP2921	Historical Homesteading/Agriculture-Related Habitation Site	Avoid and Test
5EP2924	Prehistoric Open Site Lacking Features	Sign and Avoid
5FN1578	Prehistoric Open Site Lacking Features	Avoid and Test
5FN1582	Prehistoric Open Site Lacking Features	Avoid and Test
5FN1588	Prehistoric Open Site Lacking Features	Avoid and Test
5FN1592	Prehistoric Sheltered Site with Rock Art	Avoid and Test
5PE2940	Prehistoric Open Structure Site	No Further Consideration
5PE2941	Prehistoric Open Occupation Hearth Site	Data Recovery
5PE2954	Prehistoric Open Site Lacking Features	Avoid and Test
5PE2958	Prehistoric Sheltered Site	Avoid and Test
5PE2963	Prehistoric Sheltered Site	Avoid and Test
5PE2964	Prehistoric Open Structure Site	Avoid and Test
5PE2966	Prehistoric Open Site Lacking Features	Avoid and Test
5PE2967	Prehistoric Sheltered Site	Avoid and Test
5PE2968	Prehistoric Open Occupation Hearth Site	Avoid and Test
5PE2969	Prehistoric Sheltered Site	Avoid and Test
5PE2972	Prehistoric Open Site Lacking Features	Avoid and Test
5PE2978	Prehistoric Sheltered Site	Sign and Avoid
5PE2984	Prehistoric Sheltered Site	Avoid and Test

5EP2920 - prehistoric open site lacking features

The site has the potential to yield significant information on the research themes of prehistoric economies, settlement patterns, and chronology and cultural relationships as outlined in the CRMP (Zier et al. 1987). The site has the potential for further information based on the variety and number of artifacts and the possibility of at least shallow cultural deposition. Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggest a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5EP2920 - prehistoric open site lacking features

This site is in good condition with observable depressions and alignments. Archaeological information on the early ranching/homesteading era at the FCMR is rare, and these sites are often susceptible to erosion and destruction. As the number of these sites decreases, their research potential increases. The site has the potential to yield significant information on the historical research theme of homesteading and agricultural settlement, as outlined in the CRMP (Zier et al. 1997). Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggest a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5EP2924 - prehistoric open site lacking features

The site has the potential to yield significant information on the themes of chronology and cultural relationships, settlement patterns, prehistoric economies, and technologies outlined in CRMP (Zier et al. 1997). The site provides the opportunity to learn more about prehistoric quarrying activities. Although small in size, the site has numerous artifacts, while partially buried artifacts suggest that at least a shallow cultural deposit is present. Surface evidence indicates that the site is eligible for nomination to the NRHP. Erosion and military impacts are perceived as minor and avoidable.

5FN1578 - prehistoric open site lacking features

The site is important because of the variety of artifact types, the number of artifacts, and the potential for intact sediment deposits. Despite military disturbance, sediments appear to be stable. The site could yield significant data on prehistoric economies, prehistoric settlement patterns, and chronological and cultural relationships, as defined in the CRMP (Zier et al. 1997). The site has been impacted by military maneuvers and some erosion. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggest a potential for buried deposits. Testing is recommended to determine if the eligibility recommendation is justified.

5FN1582 - prehistoric open site lacking features

This site has the potential for further research information under the themes of chronology and cultural relationships, settlement patterns, and prehistoric economies, as defined by Zier et al. 1997 (CRMP). The site has a variety of artifacts and the potential for at least shallow subsurface deposits, based on the presence of partially buried artifacts. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggest a potential for buried deposits. Testing is recommended to determine if the eligibility recommendation is justified.

5FN1588 - prehistoric open site lacking features

The site is recommended as eligible for nomination to the NRHP. Artifacts have been exposed through slope wash, although much of the site area is undisturbed. The site, therefore, has the potential to yield significant intact subsurface deposits that could provide important information on the research themes of chronology and cultural relationships, settlement patterns, and prehistoric economies, as outlined in the CRMP (Zier et al. 1997). The site is subject to erosion from slope wash. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggest a potential for buried deposits. Testing is recommended to determine if the eligibility recommendation is justified.

5FN1592 - prehistoric sheltered site with rock art

The site is a large flaked-lithic and ground stone scatter with two associated shelters. Sediment depth within the shelters, as well as along the bench, is sufficient to create a potential for intact subsurface deposits that could yield significant information on the following research themes: chronology and cultural relationships, rock art, paleoclimates, settlement patterns, prehistoric economies, and possibly horticulture, as defined in the CRMP (Zier et al. 1997). At least portions (i.e. rock shelter and rock art) of this very large site are clearly eligible for nomination to the NRHP. The site has likely been collected and/or looted in the past and is subject to slope erosion. Subsurface excavations are necessary to determine the nature and extent of buried deposits. Testing is recommended as the first step in the development of a management plan that

entails data recovery in the shelter.

5PE2940 - prehistoric open structure site

The site has the potential to yield significant information on the research themes of prehistoric economies, settlement patterns, architecture, and chronology and cultural relationships as outlined in the CRMP (Zier et al. 1997). Although soil deposition is shallow at the site, it does contain at least one architectural feature and two temporally diagnostic artifacts. The structural remains that make this site eligible for nomination to the NRHP are better represented by other sites along Turkey Creek that can be more easily and effectively afforded long term protection. These sites are from the same relative time period, topographic setting, and provide better examples of the qualities that make 5PE2940 eligible for nomination to the NRHP.

5PE2941 - prehistoric open occupation hearth site

The conventional radiocarbon age of 1940 ± 70 B.P., which is calibrated at 2 sigma to B.C. 80 to A.D. 235 (Beta-129180), places this hearth within the Late Archaic period at FCMR. The site has the potential to yield significant information on the research themes of prehistoric economies, settlement patterns, and chronology and cultural relationships, as defined in the CRMP (Zier et al. 1997). The feature should be excavated before it has completely eroded. The site is actively being impacted by erosion and little may remain of significant deposits that make this site eligible for nomination to the NRHP.

5PE2954 - prehistoric open site lacking features

The sediments, although shallow, have the potential to yield intact subsurface deposits that could contain features. The lack of disturbance, the relatively stable nature of the surface, the potential for intact deposits, and variety of artifacts indicate that this site has the potential to yield important information on the research themes of settlement patterns, prehistoric economies, and chronology and cultural relationships, as defined in the CRMP (Zier et al. 1997). Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggest a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5PE2958 - prehistoric sheltered site

A trowel test in the shelter indicates that the shelter has the potential for significant intact subsurface deposits. The charcoal, which is present in the subsurface sediments, is possibly datable. The site has the potential to yield significant information under the themes of settlement patterns, paleoclimates, chronology and cultural relationships, and prehistoric economies as identified by Zier et al.(1997) in the CRMP. Military disturbance and some erosional impacts are present at the site. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggest a potential for buried deposits, and testing is recommended to determine if the eligibility recommendation is justified.

5PE2963 - prehistoric sheltered site

The site possesses a feature that may have served as a temporary shelter, and the site has potential for further subsurface cultural deposits. It has the potential to yield significant information within the research themes of chronology and cultural relationships, settlement patterns, prehistoric economies, and paleoclimates, as defined in the CRMP (Zier et al.1997). Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggest a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5PE2964 - prehistoric open structure site

The site has an undisturbed circular stone feature that may date to the Early to Middle Ceramic period, and has the potential to yield significant information on the prehistoric architecture of the FCMR. The number and variety of flaked-lithic artifacts, and the potential for buried deposits within the areas of sediment accumulation, indicate that the site has potential to yield significant information on the research themes of settlement patterns, prehistoric economies, architecture, and chronology and cultural relationships, as defined in the CRMP (Zier et al. 1997). Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data, including the stone feature, suggest a potential for buried deposits. Testing is recommended to determine if the eligibility recommendation is justified.

5PE2966 - prehistoric open site lacking features

The topographic situation at this site allows for sediment buildup, and the number and diversity of artifacts on the surface suggest the possibility for intact buried deposits. The site has the potential to yield information important to prehistoric research, specifically with regard to the themes of prehistoric economies, settlement patterns, and chronology and cultural

relationships as outlined in the CRMP (Zier et al.1987). The site is actively being impacted by the military. Subsurface excavations are necessary to determine if intact deposits are present and that the eligibility recommendation is justified.

5PE2967 - prehistoric sheltered site

This shelter may contain undisturbed cultural deposits based on the presence of charcoal in a trowel test and the apparent depth of sediments within the shelter. The site has the potential for further research on the themes of chronology and cultural relationships, settlement patterns, prehistoric economies, and paleoclimates as outlined in Zier et al. 1997 (CRMP). The site should be fenced to protect it from further military impacts. Subsurface excavations are necessary to determine if intact buried deposits are present and that the eligibility recommendation is justified.

5PE2968 - prehistoric open occupation hearth site

Adequate soil deposition exists at this site to provide the potential for at least shallow, buried cultural deposits. The site is likely to yield information important to prehistory under the research domains of chronology and cultural relationships, settlement patterns, and prehistoric economies, as outlined in Zier et al. (1997). The site is actively being impacted by military maneuvers. Subsurface excavations are necessary to determine if intact buried deposits are present. The subsurface data suggest a potential for buried deposits. Testing is recommended to determine if the eligibility recommendation is justified.

5PE2969 - prehistoric sheltered site

The site has the potential to yield information important to prehistory because of the presence of buried cultural material within the shelter. Further testing is necessary to determine the integrity and extent of cultural deposits. This site may yield significant information on the themes of settlement patterns, prehistoric economies, chronology and cultural relationships, and possibly paleoclimate, as identified in the CRMP (Zier et al.1997). Subsurface excavations are necessary to determine that intact buried deposits are present. The surface and subsurface data suggest a potential for buried deposits. Testing is recommended to determine if the eligibility recommendation is justified.

5PE2972 - prehistoric open site lacking features

This site is a large scatter of flakes located in an area with little previous investigation. Several sites exist nearby, and the undisturbed nature of the site and the possibility for buried cultural deposits indicate that the site has the potential for further information. The site may yield information on the research domains of settlement patterns, prehistoric economies, and chronology and cultural relationships, as defined in the CRMP (Zier et al.1997). Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggest a potential for buried deposits. Testing is recommended to determine if the eligibility recommendation is justified.

5PE2978 - prehistoric sheltered site

The site is likely to yield information important to prehistoric research. There are three alcoves within the fissure, one of which was shovel tested and produced cultural deposits to 70 cm. There are also two other sites (5PE2977 and 5PE2972) in close proximity to the fissure. There is an excellent probability that the site has the potential to yield significant information on the research themes of paleoclimates, settlement patterns, prehistoric economies, geomorphology, and chronology and cultural relationships, as outlined in the CRMP (Zier et al. 1997). Surface and subsurface evidence clearly indicates that the site is eligible for nomination. Erosion is not an immediate concern, and there is a minor potential for military impacts.

5PE2984 - prehistoric sheltered site

The site is potentially eligible for nomination to the NRHP because it has at least 25 cm of sediment accumulation that could contain buried artifacts and features in good context. The site is likely to yield information important to prehistoric research based on the research themes of chronology and cultural relationships, settlement patterns, prehistoric economies, and possibly on paleoenvironments and geomorphology as outlined in the CRMP (Zier et al.1997). Subsurface excavations are necessary to determine if intact buried deposits are present and that the eligibility recommendation is justified.

Chapter 9

Summary and Concluding Statements

The 1998 cultural resource inventory of portions of the FCMR was the fourth year of work on the base conducted under a cooperative agreement between FLC and MWAC. The 1998 project was also the largest single project yet attempted under this agreement. Over the course of five ten-day field sessions during the summer and fall of 1998, a total of 7,236 acres was inventoried. Of this total, 4,035.66 acres belonged to previously designated high-site sensitivity areas, while the remaining 3,200.37 acres belonged to medium-site sensitivity areas. The inventory comprised pieces of land distributed over the whole base but concentrated on segments in the southwest and south-central parts of the base.

A total of 89 new archeological sites and 86 isolated finds were identified and recorded. Two previously recorded sites were reevaluated. Of the 91 sites, 74 are prehistoric, 15 are historic, and two are multi-component historic and prehistoric sites. Twenty-three of these sites are recommended as eligible for nomination to the National Register of Historic Places (NRHP), while the remaining 68 are not recommended as eligible. It was recommended that those sites considered as significant be subjected to one or a combination of the following management actions: avoidance, protection (i.e., fencing), test excavation, or data recovery.

The format of this report diverges slightly from that used in previous FLC reports contributions. Specifically we added a more detailed analysis of the survey results and placed the site descriptions into an appendix (Appendix III). This reorganization reflects our growing confidence that the amount of archeological data now amassed on the FCMR is sufficient to allow for higher-level inferential syntheses to be attempted. Chapter 6, which examines, among other things, patterns of cultural behavior that can be inferred from the survey data, represents, in our view, only the tip of the analytical iceberg.

We suggest that the FLC data can be used either to confirm, refute or strengthen the predictions made by Zier et al. in the Historic Preservation Plan (1987). For example, the results from the 1998 FLC inventory generally support the previous predictions in the HPP, although site density between medium-site sensitivity areas and high-site sensitivity areas is slightly less than anticipated. The majority of sites on Booth Mountain tended to be located along its western and southern slopes, with less prehistoric occupation along the eastern slopes. Those sites on the eastern side generally are located on the lower slopes of the mountain overlooking Turkey Creek and date to the Middle Ceramic period, while those along the small drainages that flow into Booth Gulch on the western slope date to the Late Ceramic (Protohistoric) period (Zier et al. 1987:2-86, 2-89).

Data from the 1998 survey demonstrate that the southern and western slopes of Booth Mountain were indeed favored habitats for aboriginal peoples during the prehistoric period. However, a greater number of sites were located on the mountain than the original model predicted. Also, there was a higher site density in heavily dissected canyons and on mesa tops along the western edge of the FCMR and north and west of Red Creek.

We must stress, however, that the difference between the two sensitivity areas is not sufficiently great to warrant rejection of the model as a whole. Rather, with new site data and advances in site location modeling, greater accuracy in predicting site locations should be achievable.

We also suggest that archaeologists constantly be aware of the interpretive biases implicitly built into their evaluations. For example, of the sites in the 1998 survey recommended as eligible, there is a clear bias towards those sites that either possess architectural remains or have a high potential for buried cultural deposits. Conversely, we did not recommend as eligible sites such as historic transportation routes, historic trash scatters without architectural remains, or mines and historic period quarries. We are not, of course, bringing into question the validity of our own recommendations. Rather, we merely point out that the criteria that help define "significant" are dynamic and should be expected to change in the light of the accumulation of new data and understanding of the past of a particular area. Probably we have not yet reached that stage in our creation and understanding of the FCMR's prehistory. However, future work will almost certainly necessitate a reformulation of evaluative criteria.

We wish to close this chapter by moving beyond the relatively small confines of the FCMR to examine how archeological work at the FCMR can contribute to a greater understanding, and appreciation of, the past of the nation, the ultimate goal of all cultural preservation work. The FCMR is one of the most intensively archeologically studied areas in southeastern Colorado. For numerous reasons, which are detailed in chapter two of this report, southeastern Colorado has not, however, received the attention it deserves. Archeological work at the FCMR can materially contribute to a greater understanding of this part of the state, and indeed, we would suggest that FCMR prehistory could materially contribute to a much-needed synthesis of southeastern Colorado prehistory.

There are four reasons for our optimism. First, the FCMR has the most detailed and intensive set of site data currently available in southeastern Colorado (with the exception, of course, of the PCMS), and these are available on computer-generated databases. Second, the cultural resource inventories of the base have revealed a wide range of site types and have covered multiple environmental zones and landforms. Therefore, we have a fairly representative sample of the total site universe. Third, there have been *recent* excavations of selected sites on the base (e.g., Avery Ranch site and Recon John Shelter). And although more sites need to be excavated so that we are less reliant on surface survey data, nevertheless, subsurface data are available to assist in the formulation and testing of hypotheses on various aspects of prehistoric and historic behavior. Finally, the FCMR straddles a number of environmental zones. Although this environmental complexity can be expected to create a more complex set of cultural adaptations than might be expected in a more uniform environment, nevertheless, this very complexity is what should challenge us to come to grips with the palimpsests of human behavior that have created the archeological record of the FCMR. In essence, we would argue that if FCMR's prehistory can be understood, then many of the intractable problems bedeviling our understanding of southeastern Colorado prehistory in general will become less so.

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Appendix I
State of Colorado Site Forms
(Removed from public distribution)

Appendix II
Xerox Copies of U.S.G.S. 7.5' Quadrangle Maps
(Removed from public distribution)

Appendix III
Site Descriptions

El Paso County

5EP2904

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5890 feet (1795 m) asl

Aspect: 45 ° Slope: 14 °

Site Dimensions: 14 m E/W x 30 m N/S

This site consists of a sparse flaked-lithic artifact scatter located on the surface of an eroding second terrace above the west side of the Turkey Creek valley. The site is relatively small and bounded by intermittent drainages to the south and west (Figure III.1). These drainages have produced cuts that have exposed a maximum of 30 cm of soil deposition. The soil is a light brown silty sand. Sandstone bedrock is either exposed or is at shallow depths across the site, with gravels covering the surface. The vegetation on the site is predominantly juniper, pinon, prickly pear cactus, cholla, and sagebrush with mixed scrubland and woodland in the surrounding area. Military impact from vehicles and foot traffic is evident, and there is a two-track road that bisects the northern end of the site.

A total of seventeen flaked-lithic artifacts was analyzed in the field (Table III.1). The raw material types are chert, quartzite and orthoquartzite. All observed lithic raw materials can be locally obtained. No tools or temporally diagnostic artifacts were identified, and the cultural affiliation of the site remains inconclusive. The small number of artifacts limits the inferences that can be drawn from the assemblage, but does indicate at least limited amounts of both core reduction and tool manufacturing.

Statement of Significance: This site is not eligible for nomination to the NRHP based on the lack of significant soil depth, lack of features, and the small number of artifacts on the site. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2905

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5950 ft (1814 m)

Aspect: 180 ° Slope: 2 °

Site Dimensions: 104 m N/S x 20 m E/W

The site is located near the southeast edge of an east-trending ridge (Figure III.2). The artifacts were observed on slope surfaces, along tank trails, and by the tree line. Vegetation on the site consists of juniper, pinon, prickly pear cactus, cholla, and prairie grasses. Large portions of sandstone bedrock are exposed at the site, and the ridge and slope have numerous gravels on the surface. The soil is a reddish tan silty sand. Due to erosion, the soils are relatively thin (<20 cm) and have little potential for subsurface cultural deposits. Erosion has altered the site, dispersing the artifacts down slope. Military disturbance, in the form of trails and rock emplacements, also disturb the site. A two-track road goes through the north end of the site.

A total of seventy-six artifacts was analyzed in the field. No tools or diagnostic artifacts were observed. Of the total number of artifacts observed, the vast majority is semi-translucent white chert, with two pieces of quartzite (Table III.2). The number of smaller flakes, the relatively high number of complex flakes, and the high percentage of flakes without cortex suggests that tool production was the most prevalent flaking activity practiced at the site (Ahler and Smail 1999). In contrast, classification of the assemblage following Sullivan and Rosen (1985) suggests more of an emphasis on core-reduction rather than on tool manufacturing. The site is of undetermined age and cultural affiliation.

Statement of Significance: The lack of significant soil deposition, the amount of disturbance caused by erosion and military activities, and the lack of features are reasons that the site is not recommended as eligible for nomination to the NHRP. All artifacts on the surface were inventoried. Site documentation has exhausted its research potential.

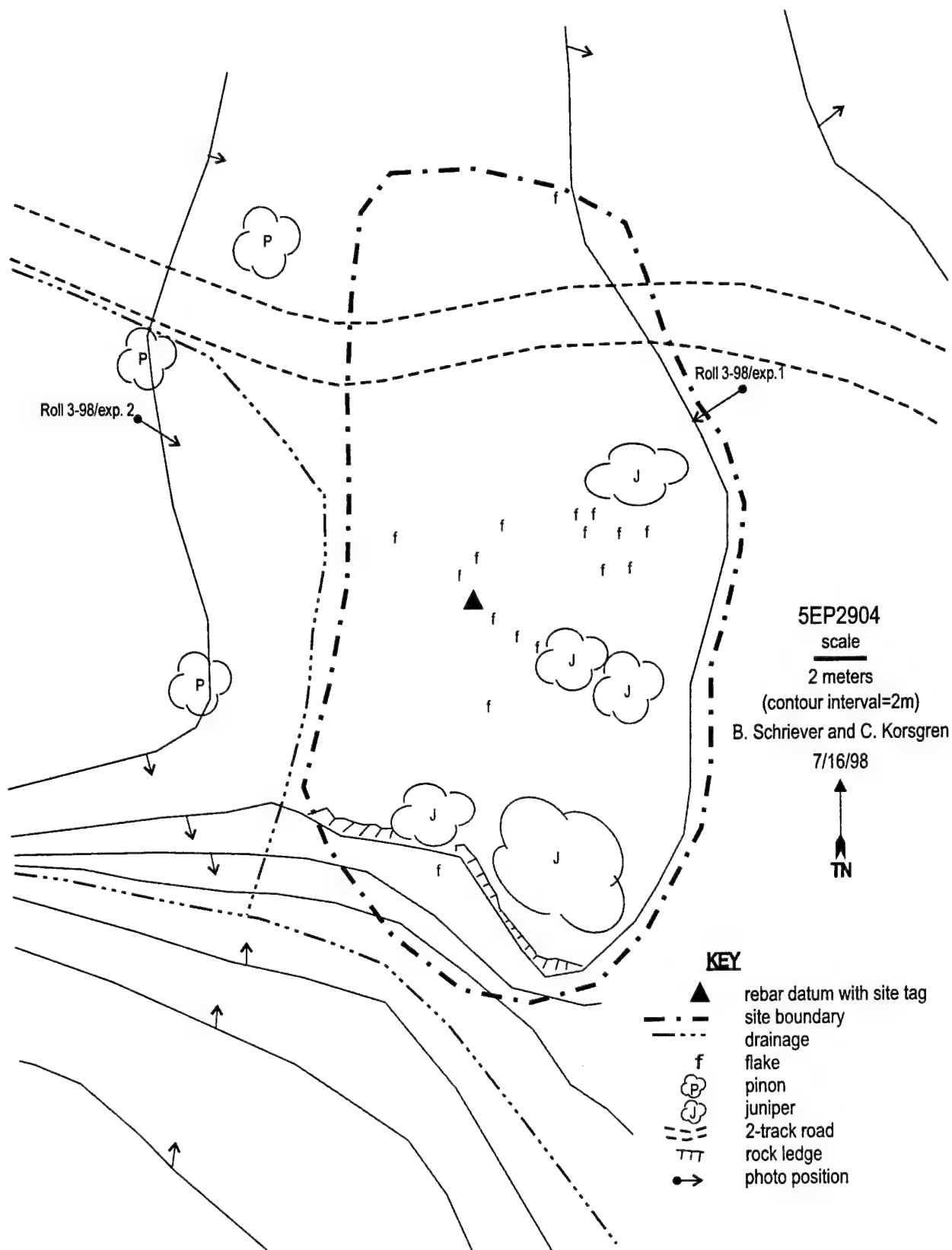


Figure III.1. Site Map, 5EP2904.

Table III.1. Flaked-lithic Debitage, 5EP2904.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		7	3	5						15 (88.2%)
1/4"-1/2"				1						1 (5.9%)
<1/4"				1						1 (5.9%)
Total (%)		7 (41.2%)	3 (17.6%)	7 (41.2%)						17 (100%)
Flake Type										
Shatter		2								2 (11.8%)
Simple		2	2	3						7 (41.2%)
Complex		3	1	4						8 (47%)
Bifacial Thinning										
Total (%)		7 (41.2%)	3 (17.6%)	7 (41.2%)						17 (100%)
Cortex										
Present		2		6						8 (47%)
Absent		5	3	1						9 (53%)
Total (%)		7 (41.2%)	3 (17.6%)	7 (41.2%)						17 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		5	3	5						13 (76.4%)
Broken				2						2 (11.8%)
Flake Fragment										
Debris		2								2 (11.8%)
Total (%)		7 (41.2%)	3 (17.6%)	7 (41.2%)						17 (100%)

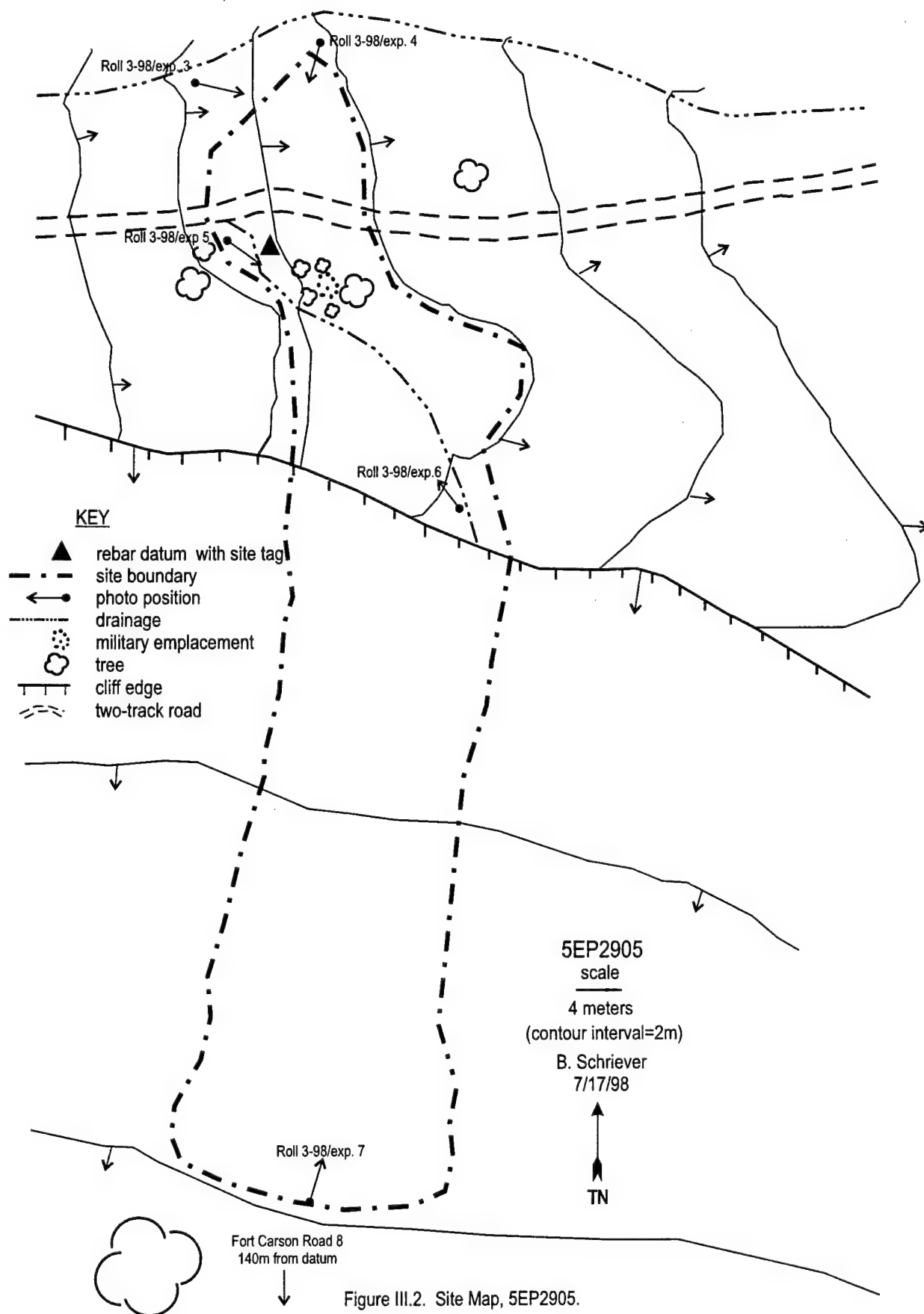


Figure III.2. Site Map, 5EP2905.

Table III.2. Flaked-lithic Debitage, 5EP2905.

Material Type							
5EP2905	Homfels and Basalts	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Total (%)
Size							
>1/2"		2		22			24 (31.6%)
1/4"-1/2"				50			50 (65.8%)
<1/4"				2			2 (2.6%)
Total (%)		2 (2.6%)		74 (97.4%)			76 (100%)
Flake Type							
Shatter		2		10			12 (15.8%)
Simple				30			30 (39.5%)
Complex				34			34 (44.7%)
Bifacial Thinning							
Total (%)		2 (2.6%)		74 (97.4%)			76 (100%)
Cortex							
Present		2		11			13 (17.1%)
Absent				63			63 (82.9%)
Total (%)		2 (2.6%)		74 (97.4%)			76 (100%)
Flake Type (Sullivan and Rosen 1985)							
Complete		1		29			30 (39.5%)
Broken				20			20 (26.3%)
Flake Fragment				9			9 (11.8%)
Debris		1		16			17 (22.4%)
Total (%)		2 (2.6%)		74 (97.4%)			76 (100%)

Management Recommendation: No further archeological work.

5EP2906

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5940 ft (1810 m) asl

Aspect: 225 ° Slope: 2 °

Site Dimensions: 72 m E/W x 68 m N/S

This site is located on a northwest/southeast-trending ridge (Figure III.3) that rises in elevation as it trends to the northwest. A small valley is to the west and the Turkey Creek drainage area is to the north and east. The vegetation consists of pinon, juniper, bunch grasses, cholla, and prickly pear cactus, with similar surrounding vegetation. The soil is a light brown silty sand with a soil depth of 20 cm or less. The site has heavy disturbance from vehicle traffic and surface deflation.

The site consists of thirteen flakes which were analyzed in the field (Table III.3). No cultural features or tools were observed. Both raw material types can be locally obtained. The small number of artifacts limits the inferences that can be drawn from the assemblage, and the cultural affiliation and age are undetermined.

Statement of Significance: This site is not eligible for recommendation to the NHRP, because of the heavy military disturbance, lack of features, lack of sediment depth, and the sparse number of artifacts. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2907

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6130 ft (1868 m) asl

Aspect: 90 ° Slope: 2 °

Site Dimensions: 40 m N/S x 67 m E/W

The site is located along a north/south finger ridge separating two tributaries of Rule Canyon. The site topography slopes gently to the east toward a small drainage on the ridge (Figure III.4). This small ephemeral drainage is visible at the base of the slope to the east. The site is just inside the tree line and above a grassy area that surrounds the drainage. Vegetation on the site is pinon and juniper trees with native grasses, cholla, and prickly pear cactus, with the area to the east being open grassland. The soil is a shallow (5 cm) grayish brown silty sand. Sandstone bedrock is exposed in the area, and the sediments are very gravelly. Military vehicular tracks are present at the site.

A total of fifteen flaked-lithic artifacts was recorded at the site. The artifacts include one orthoquartzite core, one chert core fragment, and thirteen flakes (Table III.4). This assemblage suggests that limited core reduction and tool manufacture took place at the site. All observed lithic raw materials can be locally obtained. The limited information precludes a determination of age or cultural affiliation.

Statement of Significance: This site is not eligible for recommendation to the NHRP. This site has a sparse number of artifacts, and the shallow sediments do not allow for subsurface deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2908

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6110 ft (1862 m) asl

Aspect: 270 ° Slope: 1 °

Site Dimensions: 55 m N/S x 10 m E/W

5EP2906

scale

10 meters

(contour interval=1.5m)

R. Korgel

7/17/98

TN

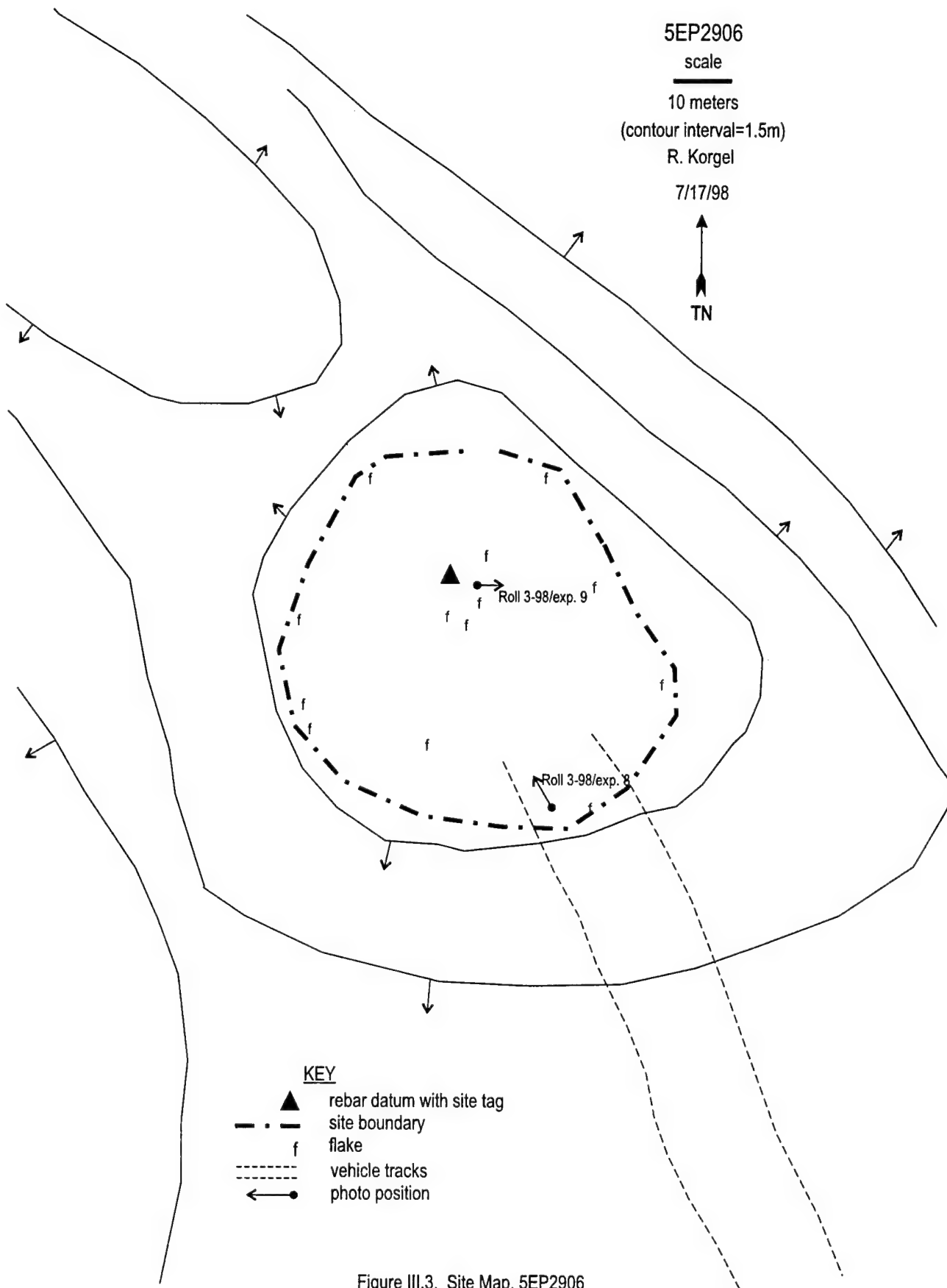


Figure III.3. Site Map, 5EP2906

Table III.3. Flaked-lithic Debitage, 5EP2906.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		4		3						7 (53.8%)
1/4"-1/2"		4		1						5 (38.5%)
<1/4"				1						1 (7.7%)
Total (%)		8 (61.5%)		5 (38.5%)						13 (100%)
Flake Type										
Shatter										
Simple		7		3						10 (76.9%)
Complex		1		2						3 (23.1%)
Bifacial Thinning										
Total (%)		8 (61.5%)		5 (38.5%)						13 (100%)
Cortex										
Present		1		3						4 (30.8%)
Absent		7		2						9 (69.2%)
Total (%)		8 (61.5%)		5 (38.5%)						13 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		2								2 (15.4%)
Broken		1		4						5 (38.5%)
Flake Fragment		5		1						6 (46.1%)
Debris										
Total (%)		8 (61.5%)		5 (38.5%)						13 (100%)

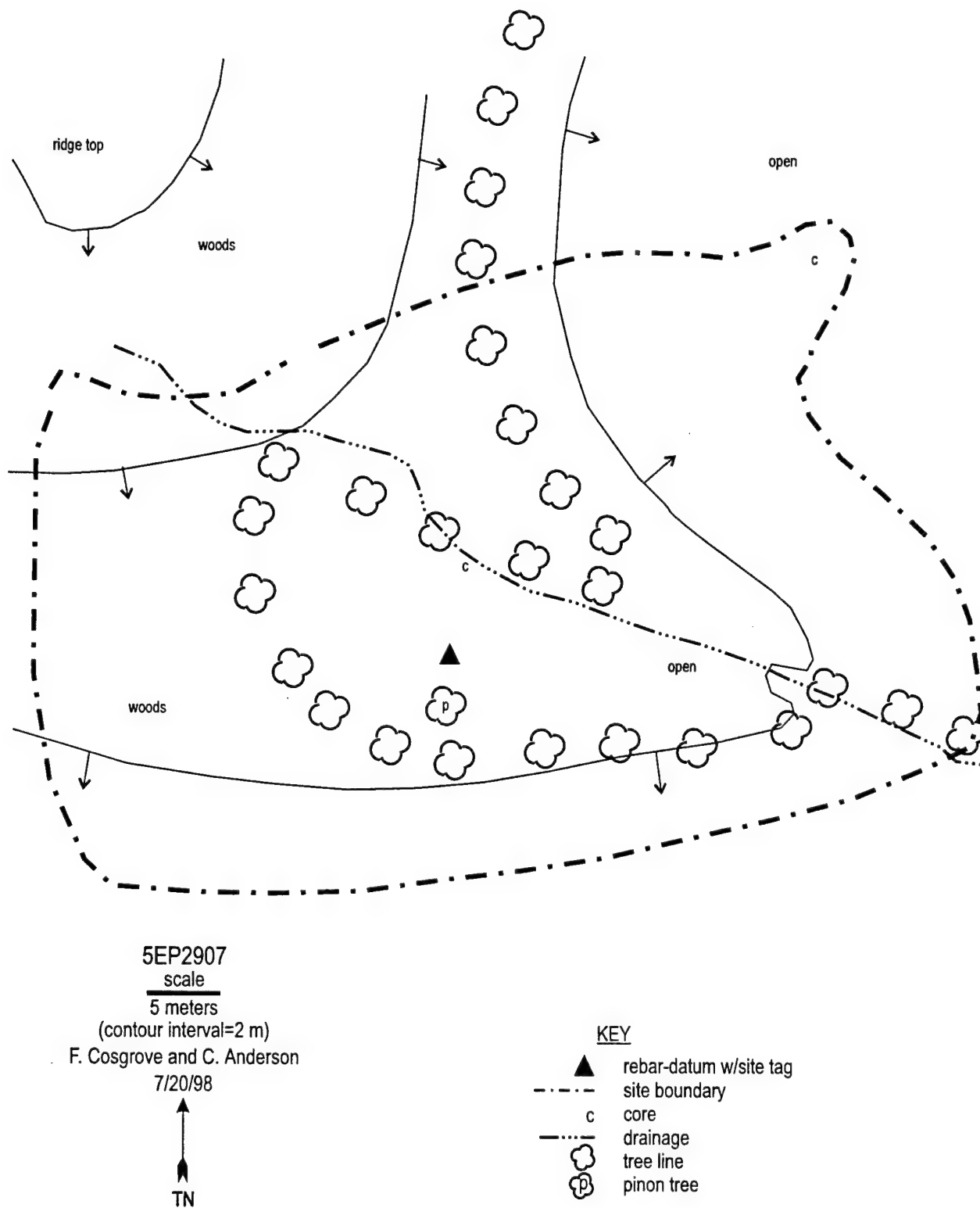


Figure III.4. Site Map, 5EP2907.

Table III.4. Flaked-lithic Debitage, 5EP2907.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			7	3						10 (76.9%)
1/4"-1/2"			1	1	1					3 (23.1%)
<1/4"										
Total (%)			8 (61.5%)	4 (30.8%)	1 (7.7%)					13 (100%)
Flake Type										
Shatter										
Simple			7	4	1					12 (92.37%)
Complex			1							1 (7.7%)
Bifacial Thinning										
Total (%)			8 (61.5%)	4 (30.8%)	1 (7.7%)					13 (100%)
Cortex										
Present			3	1	1					5 (38.5%)
Absent			5	3						8 (61.5%)
Total (%)			8 (61.5%)	4 (30.8%)	1 (7.7%)					13 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			1		1					2 (15.4%)
Broken			3	2						5 (38.5%)
Flake Fragment			4	2						6 (46.1%)
Debris										
Total (%)			8 (61.5%)	4 (30.8%)	1 (7.7%)					13 (100%)

The site is a sparse flaked-lithic artifact scatter located along the top of a north/south-trending, finger ridge that separates two tributaries of Rule Canyon (Figure III.5). A steep escarpment above the western tributary is directly west of the site and just south of a western bend along the ridge top. The site is on a slight slope about 140 m from the south end of the ridge. An ephemeral drainage is visible at the base of the slope from the site. Vegetation at the site is pinon, juniper, native grasses, prickly pear cactus, cholla cactus, and mountain mahogany, with open grassland to the east. Sediments within are a light brown silty sand and are shallow (0-10 cm). Sandstone gravels and bedrock are visible at the site. There is evidence of military vehicular traffic along the west side where military debris is present.

One chalcedony projectile point was located and collected, and seven flakes were observed (Table III.5). All of the observed lithic raw materials can be locally obtained. The small number of flakes limits the inferences that can be drawn from the assemblage, but lithic reduction and hunting are suggested. The projectile point (Figure 7.2a) is dated to the Middle to Late Ceramic periods from about AD 1000-AD 1750 (Category P50 [Lintz and Anderson 1989: 175]).

Statement of Significance: This site is not eligible for recommendation to the NHRP because of the paucity of artifacts and the lack of significant sediment depth. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2909

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6350 ft (1935 m) asl

Aspect: 225° Slope: 2°

Site Dimensions: 3 m E/S x 17.5 m N/S

This site is located on a small bench (Figure III.6) on the west side of a narrow north/south-trending ridge that separates Little Turkey Creek and a tributary of Turkey Creek. The bench is approximately one-third the way up the slope from Fort Carson Road 11, and just below the scrub oak (where the ridge becomes steeper). Vegetation on the site consists of juniper, pinon, grasses, prickly pear cactus, and scrub oak. The vegetation to the west is an open grassland. The bench has several large sandstone boulders, and sandstone gravels are on the surface in the area of the artifact scatter. This area is subject to slope wash and soil deposition is shallow (20 cm). The soil is a silty sand.

A total of ten artifacts was located (Table III.6). The flakes were analyzed in the field. The ten artifacts include one orthoquartzite unifacially retouched flake, and nine flakes. The retouched flake was collected. All observed raw materials can be locally obtained. The small number of flakes limits the inferences that can be drawn from the assemblage.

Statement of Significance: This site is not eligible for recommendation to the NHRP. The site has little potential to yield further information based on the paucity of artifacts and the low potential for buried cultural remains. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2910

Site Type: Historical Homesteading/Agricultural Related-Habitation Site

Elevation: 5885 ft (1794 m) asl

Aspect: 142° Slope: 1°

Site Dimensions: 103 m E/W x 43 m N/S

This site is an early 20th century habitation site located on the first terrace above Turkey Creek, which is 140 m to the east (Figure III.7). Three features and associated artifact scatters were defined. A corral, 150 m north-northeast of the site, is potentially associated with the site, but was not recorded as such. The terrace is supplied by overbank deposits and alluvial fan sediments from the slopes to the west. The sediments consist of a yellow-brown silt loam with an estimated depth of over a meter, which is indicated by the alluvial setting of the site. The surface of the site has a slight easterly slope. The

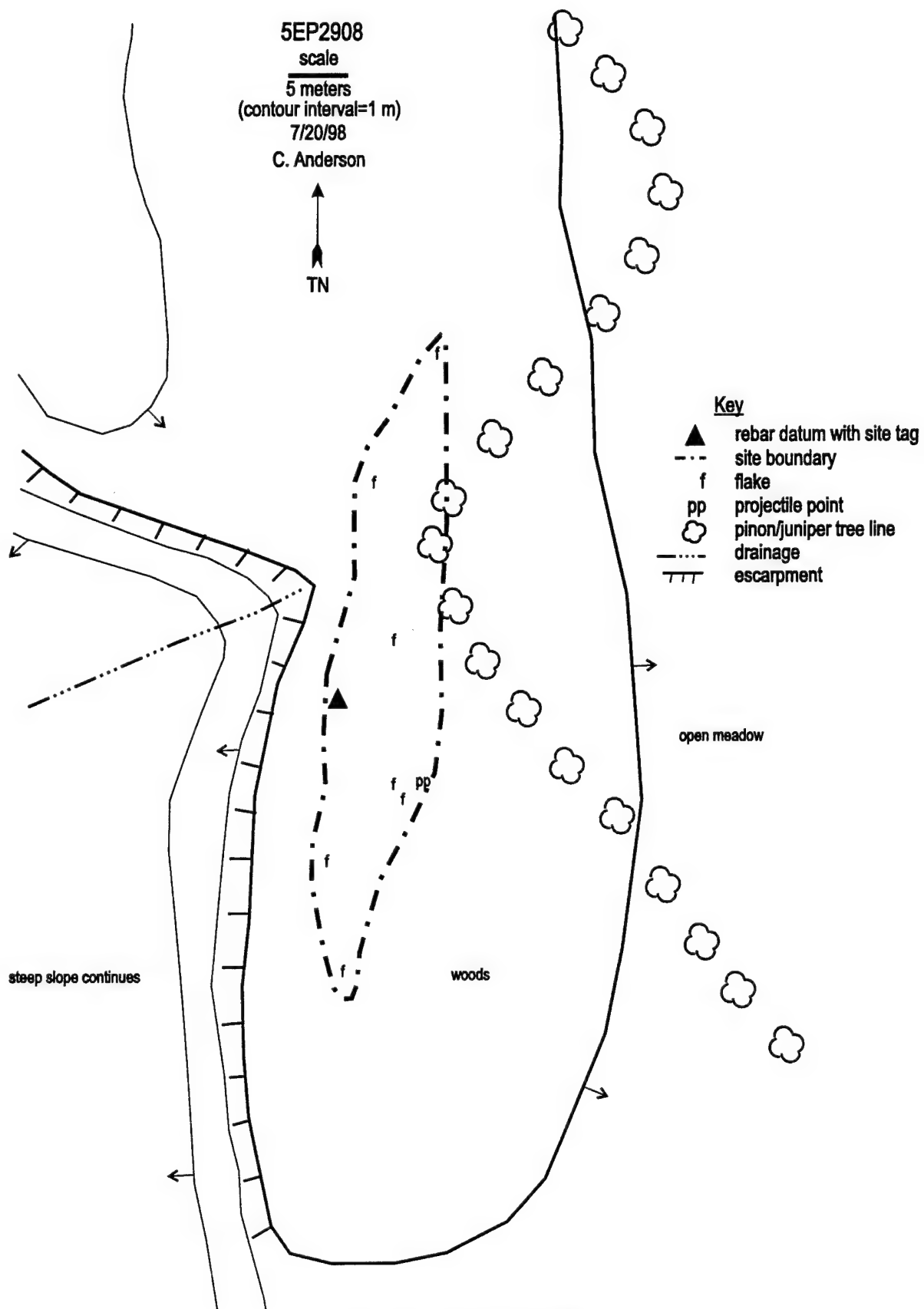


Figure III.5. Site Map, 5EP2908.

Table III.5. Flaked-lithic Debitage, 5EP2908.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			3	1						4 (57.1%)
1/4"-1/2"			2		1					3 (42.9%)
<1/4"										
Total (%)			5 (71.4%)	1 (14.3%)	1 (14.3%)					7 (100%)
Flake Type										
Shatter			1							1 (14.3%)
Simple			3		1					
Complex			1	1						
Bifacial Thinning										
Total (%)			5 (71.4%)	1 (14.3%)	1 (14.3%)					7 (100%)
Cortex										
Present			1							1 (14.3%)
Absent			4	1	1					6 (85.7%)
Total (%)			5 (71.4%)	1 (14.3%)	1 (14.3%)					7 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			1		1					2 (28.6%)
Broken			1	1						2 (28.6%)
Flake Fragment			2							2 (28.6%)
Debris			1							1 (14.3%)
Total (%)			5 (71.4%)	1 (14.3%)	1 (14.3%)					7 (100%)

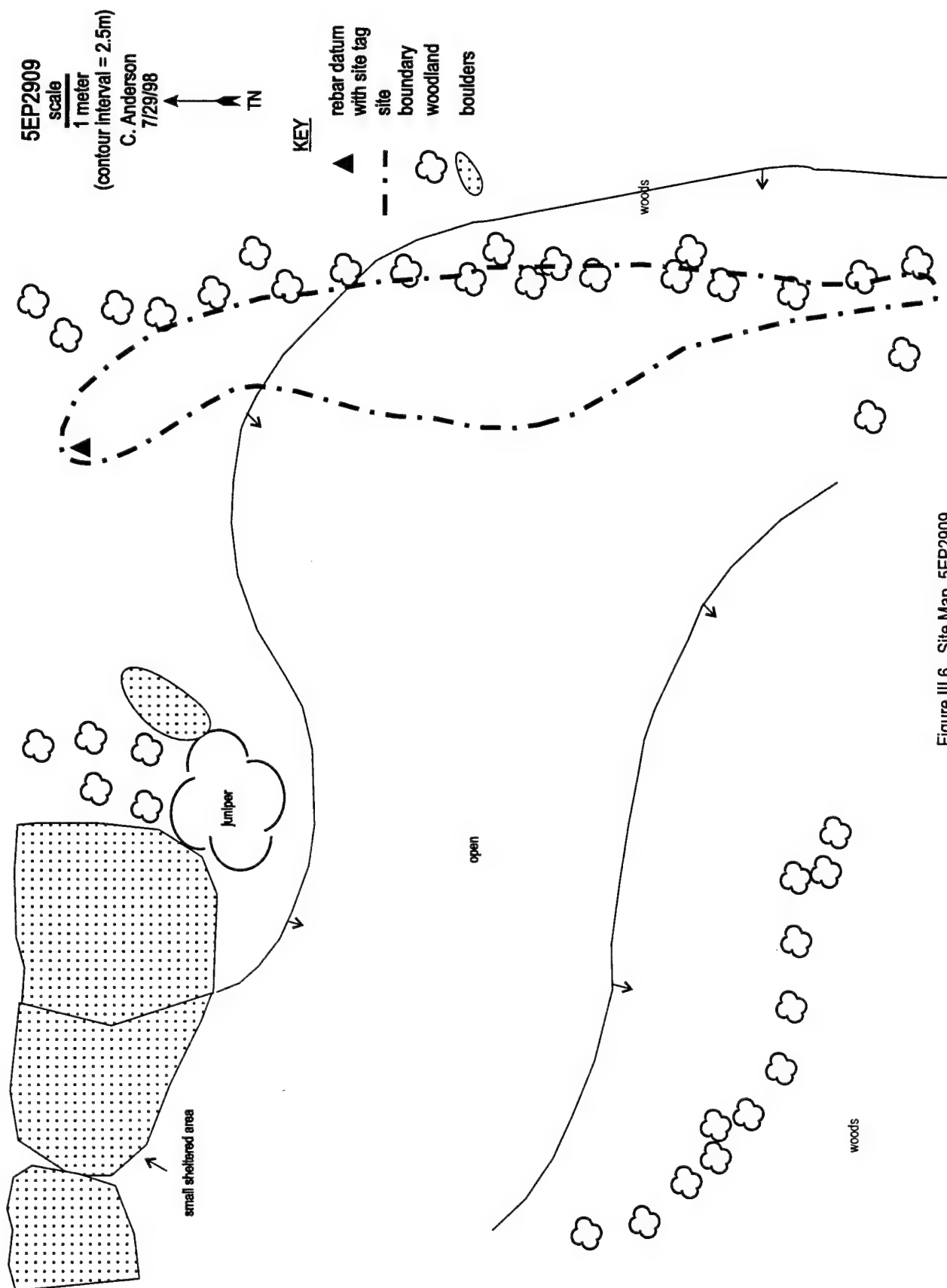


Figure III.6. Site Map, 5EP2909.

Table III.6. Flaked-lithic Debitage, 5EP2909.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	5							6 (66.7%)
1/4"-1/2"		1	2							3 (33.3%)
<1/4"										
Total (%)		2 (22.2%)	7 (77.8%)							9 (100%)
Flake Type										
Shatter			2							2 (22.2%)
Simple			2							2 (22.2%)
Complex		2	3							5 (55.6%)
Bifacial Thinning										
Total (%)		2 (22.2%)	7 (77.8%)							9 (100%)
Cortex										
Present			3							3 (33.3%)
Absent		2	4							6 (66.7%)
Total (%)		2 (22.2%)	7 (77.8%)							9 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		2	2							4 (44.4%)
Broken			2							2 (22.2%)
Flake Fragment			1							1 (11.2%)
Debris			2							2 (22.2%)
Total (%)		2 (22.2%)	7 (77.8%)							9 (100%)

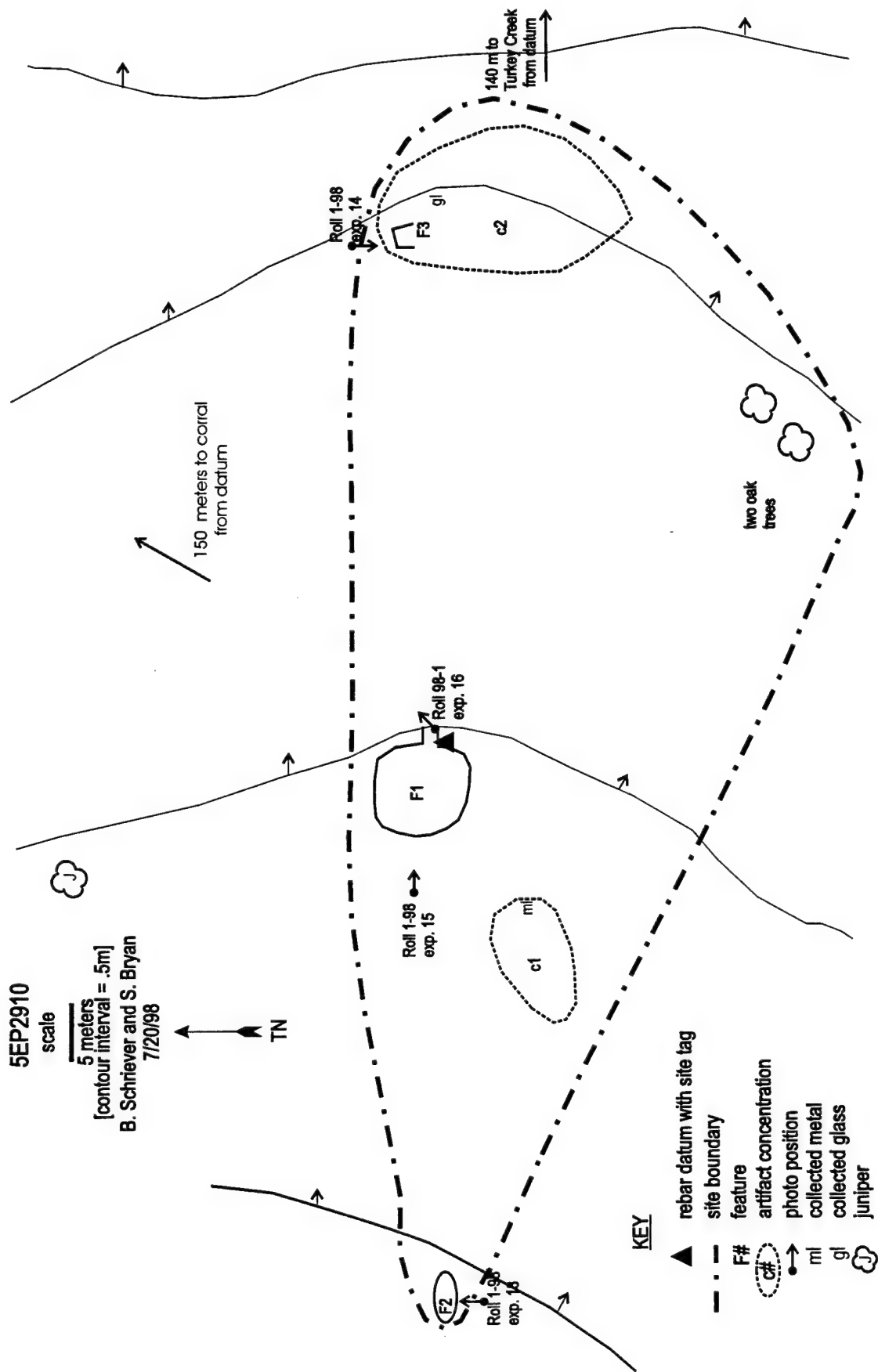


Figure III.7. Site map, 5EP2910.

vegetation at the site includes prairie grasses, forbs, prickly pear cactus, yucca, and scrub oak. A woodland area is visible to the west and a riparian setting is visible to the east along Turkey Creek. The site has been reduced to ruins, but military disturbance is minimal.

The three features noted include two dugout depressions (Features 1 and 3) and one linear sandstone feature (Feature 2). Features 1 and 3 probably represent the main domicile and the outhouse respectively. A light scatter of historic artifacts and adobe surround both of these features. Both features are associated with sandstone blocks. The blocks at Feature 3 have a U-shaped outline. The sandstone at Feature 1 is more random in nature. Feature 1 measures 27' east to west by 15' north to south. Feature 3 measures 9'6" east to west and 6'6" north to south. Feature 2 is a linear rock concentration located on the western edge of the site that measures 17' east to west and 6' north to south. The function of the feature is unknown.

Approximately 200 artifacts were inventoried, the majority of which were found within two concentrations. Glass, ceramic, and metal artifacts were observed along with two small pieces of leather. Nearly three quarters of the artifact assemblage consists of bottle glass; solarized, aqua, amber, and green bottle glass were noted. A few pieces of milkglass were also present. One solarized double-ring bottle finish that was hand finished was collected. No other bottle finishes were observed. The ceramics include approximately fifty pieces of plain whiteware and five pieces of light brown stoneware. Metal artifacts include one square-headed spike nail, a couple of pieces of sheet metal, and one, metal identification tag from a Ford automobile. The tag was collected.

The site represents a historic occupation of unknown ethnic affiliation. The solarized glass, the metal tag, and the original patent date for the property suggest the site was inhabited in the early part of the 20th century. The metal tag from a Ford Motor Company vehicle has a series of 1900s dates with a final date of 1914. The earliest homestead patent for the property was granted to Phillip Driscoll on September 28, 1898.

Statement of Significance: The site represents an early 20th century domestic residence that is in ruins. Although this historic site possibly contains buried deposits, there are more informative examples of late 19th and early 20th century homesteads on the FCMR (e.g. the Andrews Homestead and the Dockum Homestead). This site is not eligible for recommendation to the NHRP. Current documentation of this site has exhausted its research potential.

Management Recommendation: No further archeological work is recommended, although a complete archival search should be completed.

5EP2911

Site Type: Prehistoric Sheltered Site

Elevation: 6040 ft (1841 m) asl

Aspect: 126 ° Slope: 19 °

Site Dimensions: 18 m N/S x 14 m E/W

This site is located in a rock shelter and alcove within a tributary drainage to Turkey Creek (Figure III.8). There are three levels to the site. The lowest level, which is the elevation of the drainage, has a 5 m long and 1.5 m wide northeast-facing alcove in the Dakota sandstone. No artifacts or rock art are present within the alcove. Sediment depth in the alcove is not known, but exceeds 30 cm. The second level consists of a sloping terrace with some alluvium and colluvium. The main portion of the site, which is the east facing rock shelter, is in this level. The third level is the top of the shelter. The vegetation on the site includes currant, serviceberry, scrub oak, pinon, juniper, grass, cholla, and prickly pear cactus. Immediately surrounding the shelter the vegetation consists of pinon, juniper, prickly pear, cholla, gamble oak, currant, and grasses. The soil depth exceeds 70 cm in the main shelter and is a light brown sandy loam with a lot of silt. Deposits within the shelter are the result of granular disintegration and are loess and alluvium. The area is clearly identifiable as a site but it has a great deal of deposition and probably high bioturbation. The shelter is in excellent condition. Army debris within the shelter is limited to a single tin can.

The rock shelter is 3.3 m wide at the opening and it is 6 m to the back wall. A small panel with grooves and dots is present

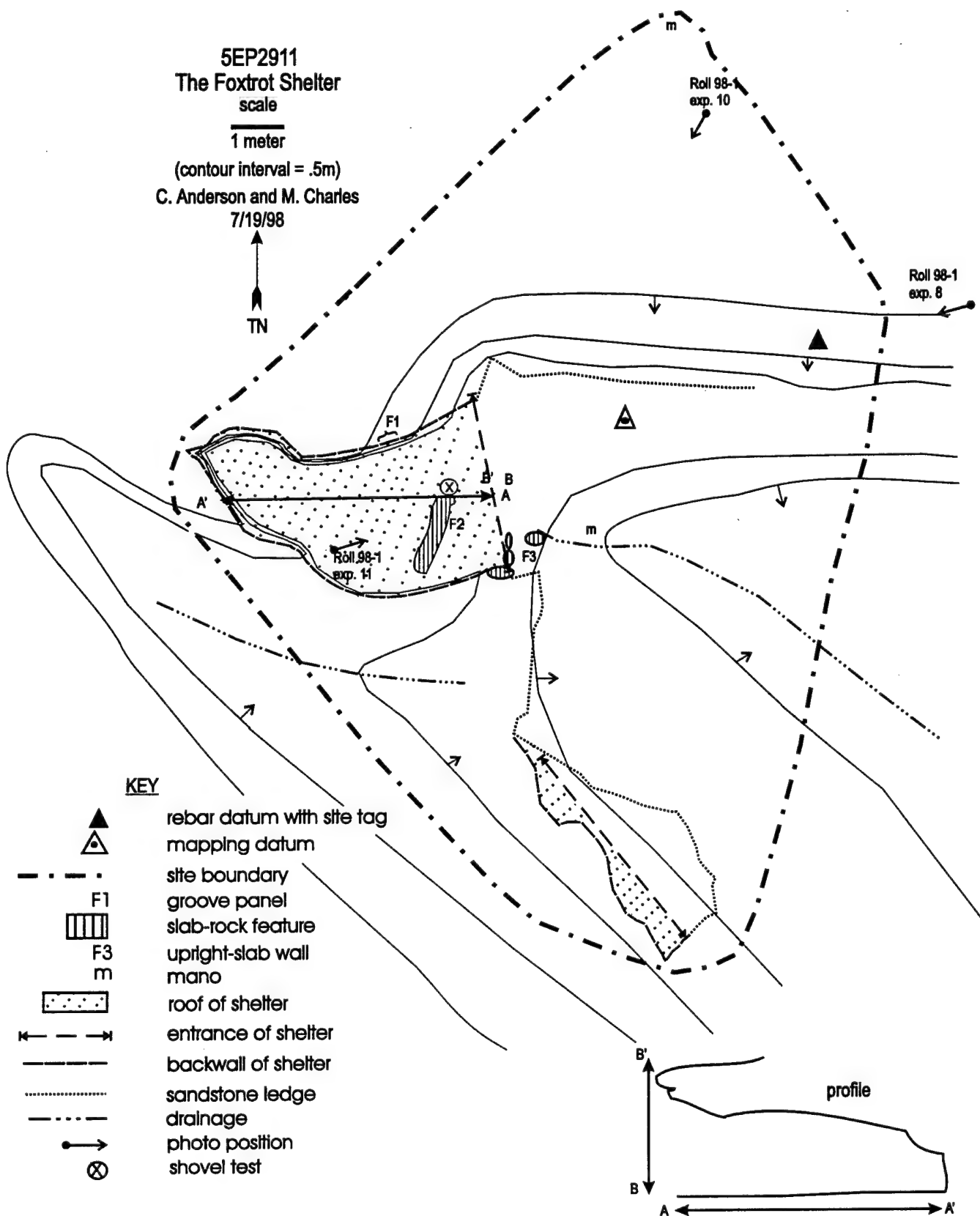


Figure III.8. Site Map and Cross Section Map, 5EP2911.

on the north wall. At the front of the shelter along the south side at the opening are two upright sandstone blocks (Feature 3), which possibly represent an intentional wall or partition. Except for a probable bone bead, no surface artifacts were observed in the shelter. Charcoal is ubiquitous across the shelter floor. Also, sandstone blocks in the shelter are not from roof fall. Most of the sandstone is weathering through granular disintegration and exfoliation. Feature 1 is 45 cm long and 30 cm wide. It begins 40 cm from the ground surface and ends 70 cm above ground surface. There are 26 vertical grooves and 10 dots. The grooves range in length from 0.7 cm to 3.5 cm, and average 5 mm in width.

The feature (Feature 2; Figure III.9) on the bedrock directly above the shelter is a 180 cm long x 170 cm wide x 21 cm thick slab of rock propped in an upright position by other rocks. The open face of the slab itself faces northwest. It is supported by a large rock that is facing southeast. This support rock is 70 cm long and 50 cm wide. At least three rocks seem to be acting as support (12 cm x 10 cm, 5 cm x 3 cm, 25 cm x 10 cm). One more rock slab (28 cm long x 28 cm wide) rests between the prop support and the upright rock slab. In front of the slab is another rectangular rock that may be propped up by another rock. Beyond this support rock are three more rocks, that may serve as props. These slabs may represent a cultural feature, since they appear to be placed there, rather than naturally occurring.



Figure III.9. Photograph of Feature 2, 5EP2911. View is to the west. Roll 1, #11.

Two sandstone manos and a possible bone bead fragment were the only artifacts noted on the surface. A shovel test in the shelter produced three orthoquartzite flakes, one chalcedony flake, seven bones of which one was burnt, one chert projectile point, charcoal, and one *yucca gualan* seed. The shovel test was discontinued at 70 cm, before sterile sediments or bedrock were encountered. The bead fragment and the contents of the shovel test were collected.

The rock shelter was probably a habitation site. A radiocarbon sample on charred material from the shovel test produced a conventional age of 1150 ± 80 B.P. (Appendix IV) and a 2 sigma calibrated date range of A.D. 685 to A.D. 1025 (Beta-129181). Based on the projectile point (Figure 7.2b) and the radiocarbon age, the site would date to the Early to Middle Ceramic periods (AD 200-AD 1400). The Projectile point is similar to Type 14 from the Recon John rock shelter (Zier 1989:141), and Category P62 from the PCMS (Lintz and Anderson 1989:193).

Statement of Significance: This site has a clearly identifiable rock shelter, with twenty-six groove marks on the north wall. In the open area directly above the shelter is a probable feature. The site has moderate bioturbation and deposition. The deposition may be covering significant cultural material. The site has the potential to yield significant information on the

themes of settlement patterns, prehistoric economies, geomorphology, paleoclimate, chronology, and cultural relationships as outlined in the CRMP (Zier et al. 1997).

Management Recommendation: Sign and Avoid. Surface and subsurface evidence clearly indicates that the site is eligible for nomination to the NRHP. Erosion is not an immediate concern and there is a minor potential for military impacts.

5EP2912

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5990 ft (1826 m) asl

Aspect: 90 ° Slope: 3 °

Site Dimensions: 16 m N/S x 14 m E/W

This site is on an easterly slope (Figure III.10) between the second and third terraces above and about 500 m west of Turkey Creek. The site vegetation consists of scattered pinon and juniper trees, bunch grasses, cholla, and prickly pear cactus. Similar vegetation surrounds the site with riparian species along Turkey Creek. The site boundary is justified by the extent of the artifact scatter, which consists of seventeen flakes. Soil deposition at the site is shallow (<20 cm). A nearby cutbank profile exposed a shallow soil profile. The soil is a grayish-brown sandy silt with gravel. There is some disturbance from alluvial slope wash and military foot traffic.

The artifact scatter consists of seventeen flakes (Table III.7). Nearly half of the artifacts were determined to be shatter or debris. No diagnostic artifacts were recovered, and cultural affiliation remains inconclusive. The site is determined to be a short-term limited activity site that utilizes locally derived materials. The small number of artifacts limits the inferences that can be drawn from the assemblage.

Statement of Significance: The site is a small artifact scatter that is restricted to surface or near surface artifacts. There is light to moderate disturbance from a variety of sources. The site has little potential to yield significant information based on the small number of artifacts and the absence of significant soil deposition. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2913

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5945 ft (1812 m) asl

Aspect: 90 ° Slope: 2-5 °

Site Dimensions: 26 m N/S x 24 m E/W

The site is along the eastern edge of the T2 terrace above Turkey Creek (Figure III.11), which lies 240 m to the east. The vegetation consists of vetch, short prairie grasses, yucca, prickly pear cactus, and pioneer species. The surrounding vegetation is the same, with riparian species along Turkey Creek. A pinon and juniper woodland lies to the west. A road cut through the site indicates that less than 10 cm of soil deposition is present at the site. The soil is a brown gravelly alluvium. The site is in poor condition, as it has been severely impacted by a tank road that bisects the site.

The site is a small concentration of flaked-lithic artifacts within and along both sides of an east to west two-track (tank) road. Well-represented varieties of lithic raw material types occur at the site. One tool, a unifacially retouched flake of basalt, was collected. A total of forty-two flaked-lithic artifacts was analyzed (Table III.8).

The amount of large flakes, the amount of complex flakes, and the nearly even percentage of cortex may suggest that both early and middle stages of reduction are reflected in the assemblage. The classification of the assemblage by the Sullivan and Rosen (1985) system differs in that there is more of an emphasis on core reduction rather than tool manufacture. Naturally occurring terrace gravels were utilized for raw material. The cultural affiliation or period is unknown.

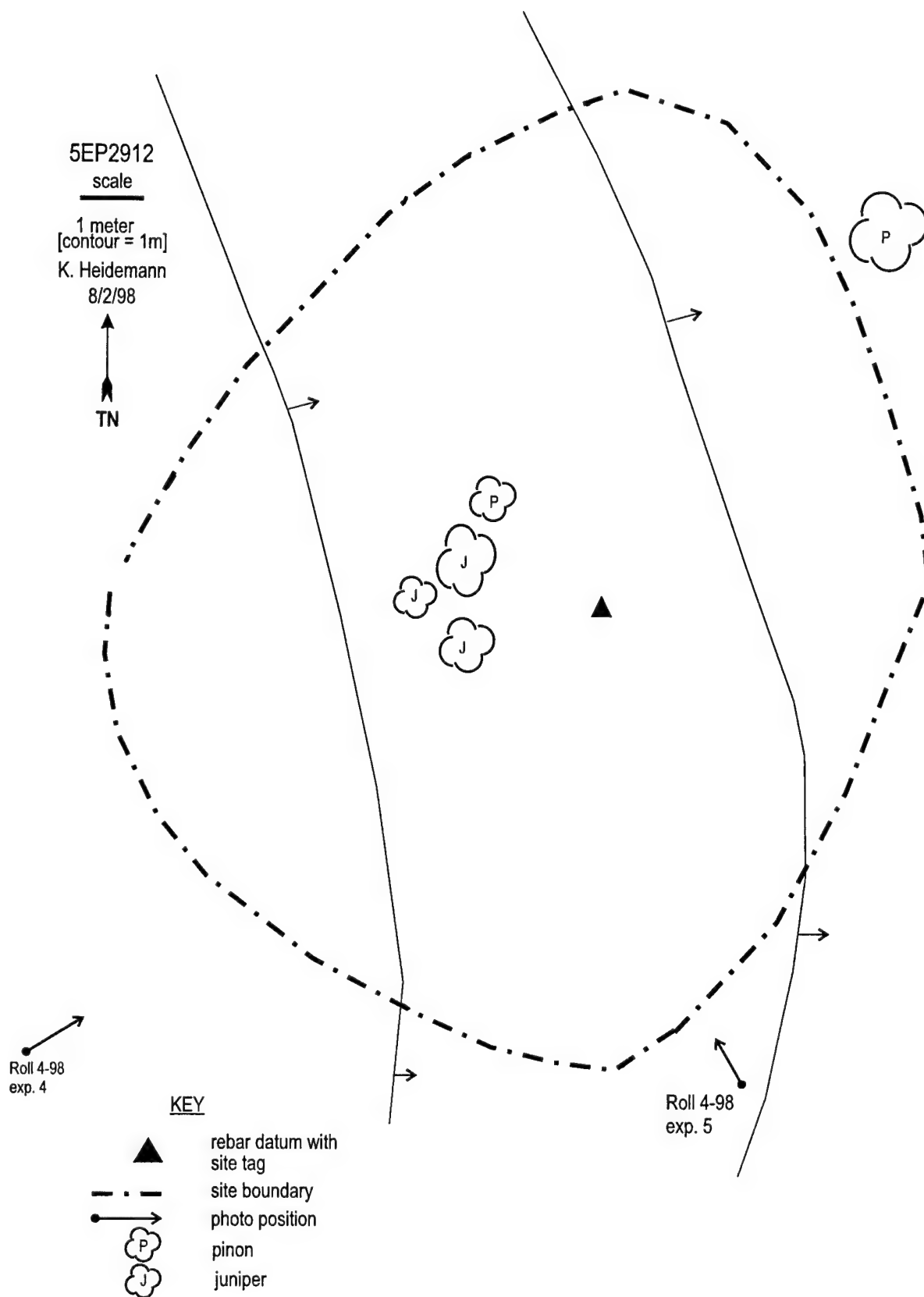


Figure III.10. Site map, 5EP2912.

Table III.7. Flaked-lithic Debitage, 5EP2912.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"	2	3	2	4		3				14 (82.4%)
1/4"-1/2"		1		1		1				3 (17.6%)
<1/4"										
Total (%)	2 (11.8%)	4 (23.5%)	2 (11.8%)	5 (29.4%)		4 (23.5%)				17 (100%)
Flake Type										
Shatter	1	2	1	2		2				8 (47.1%)
Simple	1	1	1	1		2				6 (35.6%)
Complex		1		2						3 (17.6%)
Bifacial Thinning										
Total (%)	2 (11.8%)	4 (23.5%)	2 (11.8%)	5 (29.4%)		4 (23.5%)				17 (100%)
Cortex										
Present										1 (5.9%)
Absent										16 (94.1%)
Total (%)	2 (11.8%)	4 (23.5%)	2 (11.8%)	5 (29.4%)		4 (23.5%)				17 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete	1		1	1						3 (17.6%)
Broken		1								1 (5.9%)
Flake Fragment		1		2		2				5 (29.4%)
Debris	1	2	1	2		2				8 (47.1%)
Total (%)	2 (11.8%)	4 (23.5%)	2 (11.8%)	5 (29.4%)		4 (23.5%)				17 (100%)

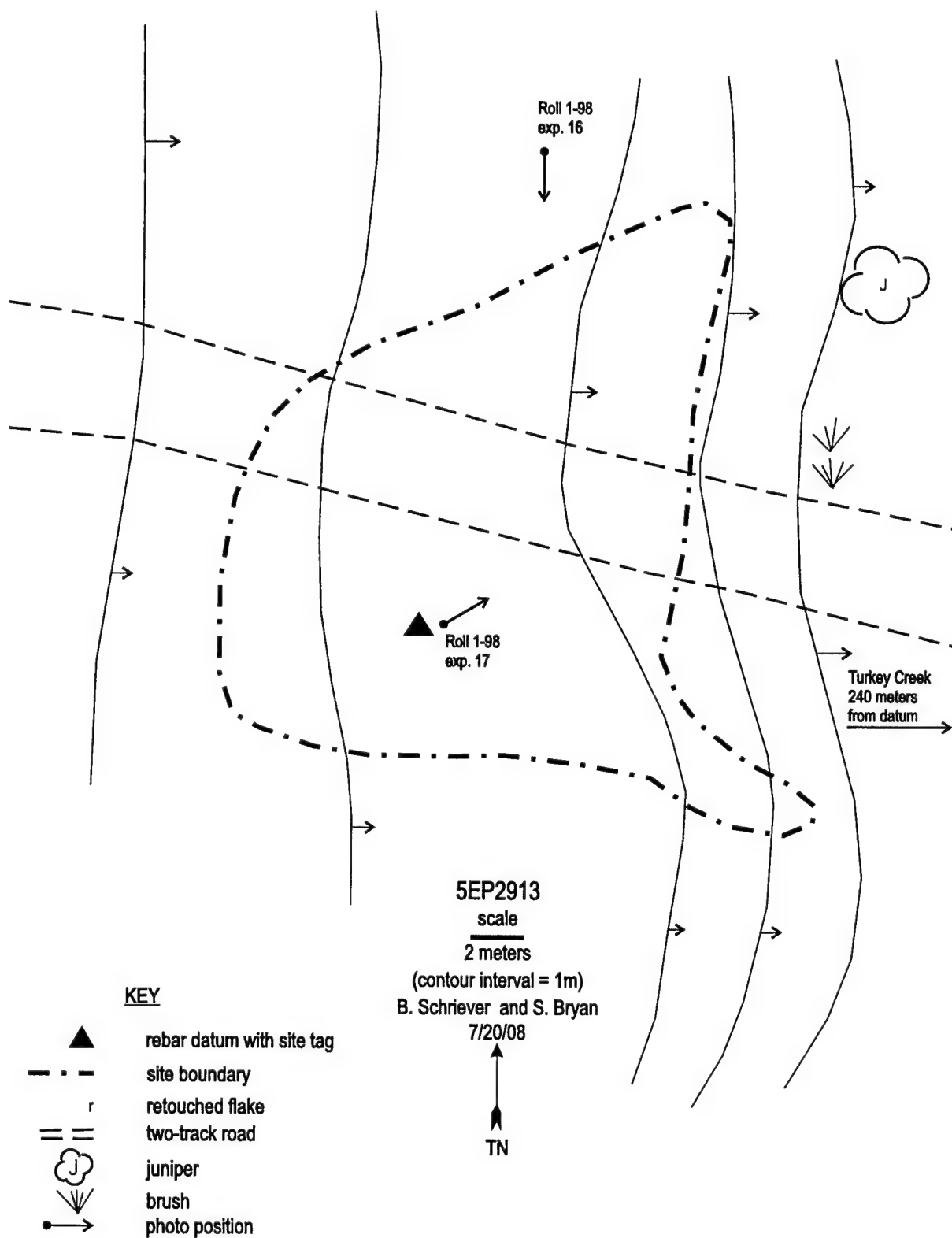


Figure III.11. Site Map, 5EP2913.

Table III.8. Flaked-lithic Debitage, 5EP2913.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Limestone		
Size										
>1/2"		2	8	7	7	3		2		29 (69%)
1/4"-1/2"				3	4	5				12 (28.6%)
<1/4"					1					1 (2.4%)
Total (%)		2 (4.8%)	8 (19%)	10 (3.8%)	12 (28.6%)	8 (19%)		2 (4.8%)		42 (100%)
Flake Type										
Shatter			4	1	2	4				11 (26.2%)
Simple			4		2	2				10 (3.8%)
Complex		2		9	8	2		2		21 (50%)
Bifacial Thinning										
Total (%)		2 (4.8%)	8 (19%)	10 (3.8%)	12 (28.6%)	8 (19%)		2 (4.8%)		42 (100%)
Cortex										
Present		2	2	5	4	6		1		20 (47.6%)
Absent			6	5	8	2		1		22 (52.4%)
Total (%)		2 (4.8%)	8 (19%)	10 (3.8%)	12 (28.6%)	8 (19%)		2 (4.8%)		42 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		2	3	6	6	1		2		20 (47.6%)
Broken			5	2	2	3				12 (28.6%)
Flake Fragment				1	3					4 (9.5%)
Debris				1	1	4				6 (14.3%)
Total (%)		2 (4.8%)	8 (19%)	10 (3.8%)	12 (28.6%)	8 (19%)		2 (4.8%)		42 (100%)

Statement of Significance: The tank track has exposed this small site and limits its research potential. The site has been severely impacted by military vehicular traffic where artifacts are washing into the road. Also, there is a lack of significant sediment depth. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2914

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6360 ft (1939 m) asl

Aspect: 225 ° Slope: 2-4 °

Site Dimensions: 30 m SW/NE x 27 m W/E

The site is located along the southern edge of a small grassy bench (Figure III.12) on the west side of a narrow north/south-trending ridge separating Little Turkey Creek and Turkey Creek. Vegetation on the site consists of pinon, narrow leaf yucca, grasses, and prickly pear cactus, while the area to the west is open grassland. The artifacts are located mainly in the sandstone gravels along the back edge of the bench; however, a few artifacts are also on the slope above the bench. The soil is a silty sand with a maximum depth of 15 cm. There is some slope erosion and minor disturbance from military foot traffic.

A total of nineteen artifacts was located. Artifacts include one orthoquartzite unifacially retouched flake, sixteen orthoquartzite flakes, one orthoquartzite shatter, and one obsidian biface fragment. The retouched flake and the biface fragment were collected. The flakes were analyzed in the field (Table III.9). Although the lithic artifact assemblage is small, the dominance of orthoquartzite suggests an emphasis on the reduction of local raw materials. The lack of diagnostic artifacts precludes any temporal control.

Statement of Significance: The small number of artifacts and the low potential for buried cultural remains limits the site's research potential. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2915

Site Type: Prehistoric Open Occupation Hearth Site

Elevation: 6410 ft (1954 m) asl

Aspect: 90 ° Slope: 3 °

Site Dimensions: 105 m E/W x 15 m N/S

This site is located on a gradual eastern slope in an open grassy area of a narrow north/south-trending ridge separating Little Turkey Creek and a large tributary of Turkey Creek (Figure III.13). The site consists of an intense concentration of flaked-lithic artifacts, a metate fragment, and two open hearths. A modern historic coal dump is located on the north edge of the site. Nearly all the artifacts are exposed along a shallow drainage that bisects the site. Artifacts found along the drainage suggest that erosion has exposed a buried cultural deposit. Vegetation dominating the site includes scrub oak, juniper, yucca, mountain mahogany, pinon, and grasses. The area to the east is open and grassy. The soil depth is greater than 40 cm and the soil is a silty sand. The site has the potential for buried cultural deposits other than those exposed by erosion.

Two burnt rock features (Features 1 and 2) with charcoal-stained soil were identified. Although suffering from erosion, both features still retain good integrity.

Feature 1: An ashy soil stain, with pieces of blackened sandstone, is located on the north bank above the small intermittent drainage. Flakes were found in direct association with the feature. The feature has been impacted by erosion but still has the potential for radiocarbon dating. A small trowel probe indicates at least 10 cm of deposition. Feature dimensions are 4 m x 2.5 m.

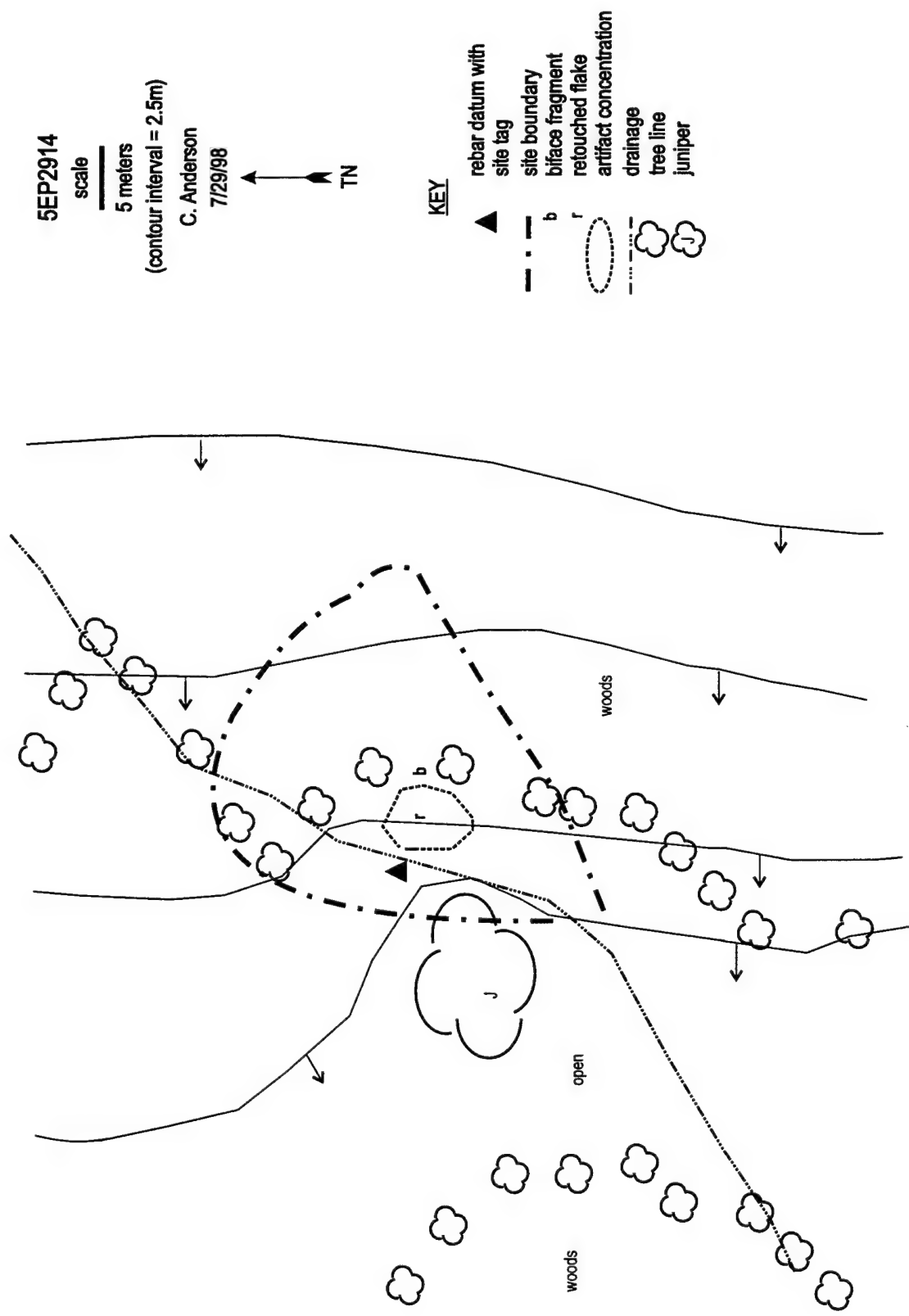


Figure III.12. Site Map, 5EP2914.

Table III.9. Flaked-lithic Debitage, 5EP2914.

Material Type										Total (%)
	Homfels and Basalts	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			12							12 (70.5%)
1/4"-1/2"			5							5 (29.4%)
<1/4"										
Total (%)			17 (100%)							17 (100%)
Flake Type										
Shatter			1							1 (5.9%)
Simple			6							6 (35.3%)
Complex			10							10 (58.8%)
Bifacial Thinning										
Total (%)			17 (100%)							17 (100%)
Cortex										
Present			2							2 (11.8%)
Absent			15							15 (88.2%)
Total (%)			17 (100%)							17 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			6							6 (35.3%)
Broken			6							6 (35.3%)
Flake Fragment			4							4 (23.5%)
Debris			1							1 (5.9%)
Total (%)			17 (100%)							17 (100%)



III.28

Feature 2: This feature is exposed along the drainage cutbank and has the same type of ashy soil and small pieces of blackened sandstone as Feature 1. This feature also has the potential for radiocarbon dating. The profile indicates that the feature extends 15-20 cm below the present ground surface. The feature dimensions are 2 m x 1 m.

Over 200 artifacts were observed on the surface. One hundred and fifty-two flakes were classified (Table III.10). Between fifty to one hundred flakes were not analyzed and were primarily chert and quartzite. One orthoquartzite projectile point, one large thin chert patterned biface, one chert flake, and one chert projectile point were collected. One sandstone metate fragment was also identified.

The activities at the site probably included core reduction, tool manufacturing, food processing, and hunting. Local raw material types were utilized. Quartzite and chert account for nearly eighty percent of all analyzed flakes. Both debitage analyses used to interpret the flake assemblage indicate that core reduction and tool production occurred, but they differ as to which is the more dominant activity. The relatively high percentage of smaller flakes, the high number of complex flakes, and the high number of flakes without cortex are representative of middle to latter stages of reduction as well as tool production (Ahler and Smail 1999). The number of large flakes and the percentage of simple flakes indicate that some earlier stages of reduction are also represented. The flake assemblage was also broken down by size grade and the variables of material type and flake type (Table III.11). Complex flakes are the most dominant flake type in Size Grade 1 and Size Grade 2. Complex chert flakes represent over half of all flakes smaller than Size Grade 1. Chert flakes also represent the higher percentages of raw material present in the two smaller size grades. Based on these observations, chert may have been more desirable for tool production than the other raw material types.

According to Sullivan and Rosen (1985), the flake assemblage would suggest that core reduction was clearly the primary activity (based on the higher percentage of complete flakes and debris). Complete flakes are more indicative of initial stages of core reduction, whereas debris can represent the remains of more intensive core reduction. The flake assemblage would also suggest that only small amounts of tool manufacturing had occurred. Broken flakes and flake fragments account for only twenty-one per cent of the assemblage.

The projectile points—a large expanding stem point Category P35 (Lintz and Anderson 1989:153), and a large expanding stem point Category P21 (Lintz and Anderson 1989:137)—date from the Late Archaic to Early Ceramic periods (1000 B.C.-A.D. 1000). One of these projectile points, the Category P35 (Figure 7.2c) is illustrated.

Statement of Significance: The site is exposed on either side of an ephemeral drainage. Although suffering from erosion, two potentially datable features retain their integrity. Areas away from the drainage may contain undisturbed cultural deposits. The site has the potential to yield significant information based on the themes of chronology and cultural relationships, prehistoric economies, and settlement patterns outlined in Zier et al. 1997 (CRMP). There is National Register District Potential under the theme of open occupation hearth site types as a noncontiguous geographical district.

Management Recommendation: Avoid and Test. The site is being actively impacted by erosion, and the site area is subject to military maneuvers. The surface data suggests a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified. If so, it would constitute the first step in the development of a management plan that could include data recovery.

5EP2916

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6310 ft (1923 m)

Aspect: 225 ° Slope: 6 °

Site Dimensions: 10 m E/W x 34 m N/S

This site is a small flaked-lithic artifact scatter located along the southern slope of a north/south-trending ridge between two ephemeral drainages (Figure III.14). Artifacts may have washed down slope, evidenced by a single flake identified on top of the hill. The vegetation on the site is pinon, juniper, prickly pear cactus, and bunch grass. Riparian species are in the larger drainages. The soil depth is 10 cm or less and is a reddish-brown slightly sandy clay with small gravels. There

Table III.10. Flaked-lithic Debitage, 5EP2915.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		31	7	29	2	1	10			80 (52.6%)
1/4"-1/2"		15	2	38	2	3	3			63 (41.4%)
<1/4"				7	1		1			9 (5.9%)
Total (%)		46 (30.3%)	9 (5.9%)	74 (48.7%)	5 (3.3%)	4 (2.6%)	14 (9.2%)			152 (100%)
Flake Type										
Shatter		16	1	24		1	3			45 (29.6%)
Simple		12	7	9	2		8			38 (25%)
Complex		18	1	41	3	3	3			69 (45.4%)
Bifacial Thinning										
Total (%)		46 (30.3%)	9 (5.9%)	74 (48.7%)	5 (3.3%)	4 (2.6%)	14 (9.2%)			152 (100%)
Cortex										
Present		30	2	21		2	4			59 (38.8%)
Absent		16	7	53	5	2	10			93 (61.2%)
Total (%)		46 (30.3%)	9 (5.9%)	74 (48.7%)	5 (3.3%)	4 (2.6%)	14 (9.2%)			152 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		25	6	33	2	3	7			76 (50%)
Broken		4	2	9			2			17 (11.2%)
Flake Fragment		3		8	3		1			15 (9.9%)
Debris		14	1	24		1	4			44 (28.9%)
Total (%)		46 (30.3%)	9 (5.9%)	74 (48.7%)	5 (3.3%)	4 (2.6%)	14 (9.2%)			152 (100%)

Table III.11. Flaked-lithic Debitage by Size Grade, 5EP2915.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	10 (34.5%)	2 (6.9%)	17 (58.6%)		29 (36.3%)
Orthoquartzite	1 (14.3%)	6 (85.7%)			7 (8.8%)
Chalcedony			2 (100%)		2 (2.5%)
Quartzite	13 (41.9%)	8 (25.8%)	10 (32.3%)		31 (38.7%)
Quartz	3 (30%)	5 (50%)	2 (20%)		10 (12.5%)
Silicified Wood			1 (100%)		1 (1.2%)
Other					
Total	27 (33.8%)	21 (26.2%)	32 (40%)		80 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	13 (34.2%)	2 (5.3%)	23 (60.5%)		38 (60.3%)
Orthoquartzite		1 (50%)	1 (50%)		2 (3.1%)
Chalcedony		2 (100%)			2 (3.1%)
Quartzite	3 (20%)	4 (26.7%)	8 (53.3%)		15 (23.8%)
Quartz		2 (66.7%)	1 (33.3%)		3 (4.8%)
Silicified Wood	1 (33.3%)		2 (66.7%)		3 (4.8%)
Other					
Total	17 (27%)	11 (17.5%)	35 (55.5%)		63 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	1 (14.3%)	5 (71.4%)	1 (14.3%)		7 (77.8%)
Orthoquartzite					
Chalcedony			1 (100%)		1 (11.1%)
Quartzite					
Quartz		1 (100%)			1 (11.1%)
Silicified Wood					
Other					
Total	1 (11.1%)	6 (66.7%)	2 (22.2%)		9 (100%)

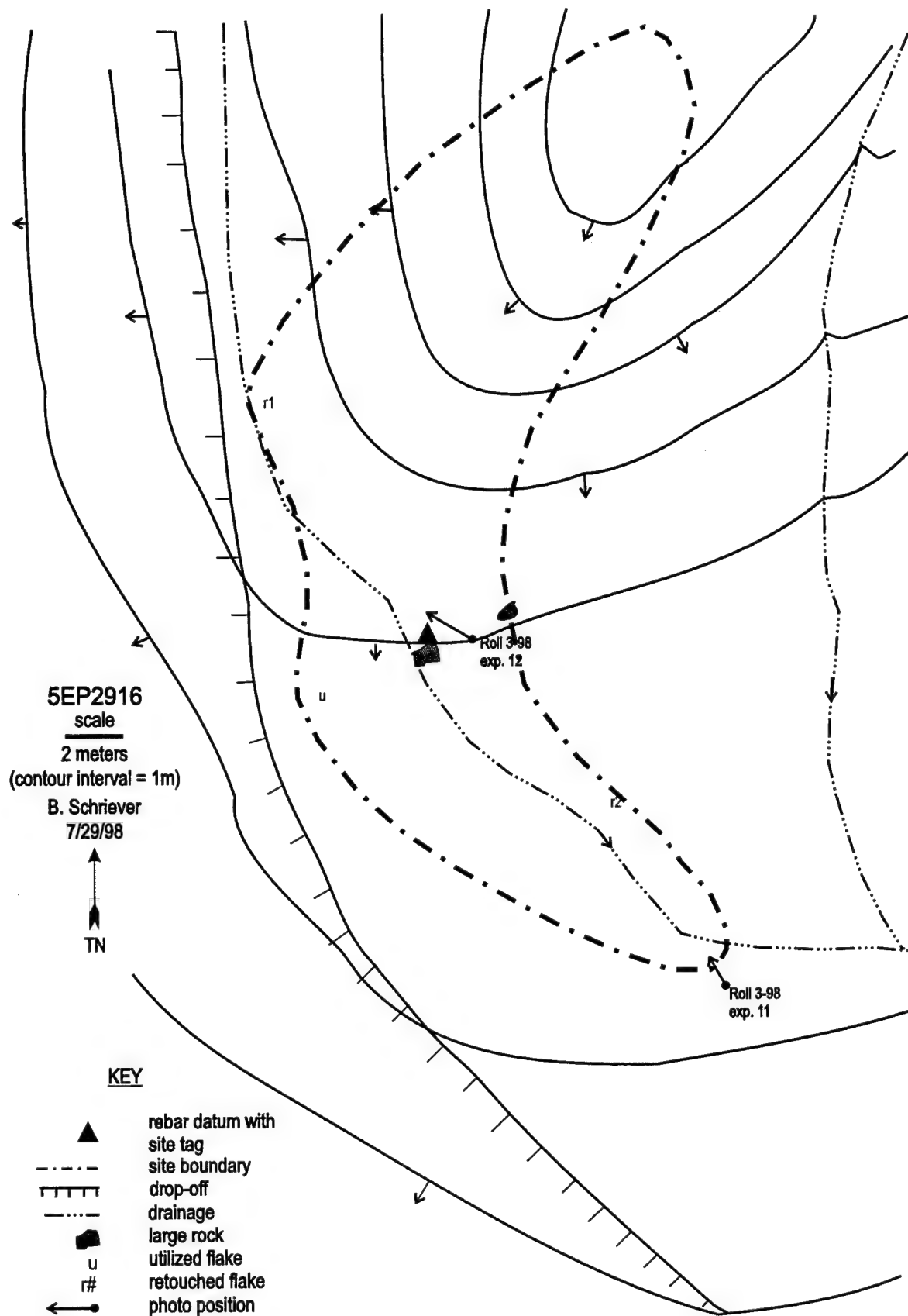


Figure III.14. Site Map, 5EP2916.

is light disturbance from slope wash.

The total number of artifacts at the site was eight. These artifacts include five flakes and two retouched chert flakes. The tools were collected and the flakes were analyzed in the field. This flaked-lithic artifact scatter represents limited activities such as lithic reduction and possibly plant or animal processing. All observed lithic raw materials can be locally obtained. The small number of flakes (Table III.12) limits the inferences that can be drawn from the assemblage. All of the tools are expedient varieties, and with the small number of artifacts, indicate that the site was occupied only a short time. Because of the lack of temporally diagnostic artifacts, the cultural affiliation and period is unknown.

Statement of Significance: This site is limited to surface or near-surface artifacts. The site has little potential to yield significant information based on the small number of artifacts and the shallow soil deposition. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2917

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6320-6370 ft (1911-1942 m) asl

Aspect: 180 ° Slope: 6 °

Site Dimensions: 315 m N/S x 165 m E/W

The site lies on a south-trending ridge separating two large tributaries of Turkey Creek. The western edge of the site is at the base of the ridge where a grassy meadow begins, which is flanked by a two-track road. The site covers the top of the ridge and areas below it (Figure III.15). The east and west boundaries are defined by the edge of the tree line. The vegetation is pinon, juniper, bunch grasses, and prickly pear cactus; the surrounding vegetation is similar with riparian varieties in the larger drainages. The soil deposition at the site is a shallow (<10 cm) reddish brown silt. The site has been impacted by military foot traffic and encampments.

Several thousand flaked-lithic artifacts (mostly chert) are estimated to be present on the surface. One dense concentration of flakes and debris, where prehistoric quarrying activities took place, was designated as Feature 1. A chert biface was collected. Chert outcrops from limestone bedrock at this site. A variety of colors are represented and include dark and light gray, brown, banded, and variegated pieces. A sample of 149 flakes was field analyzed (Table III.13). Both types of debitage analysis indicate that core reduction was the primary activity at the site. Using Ahler and Smail (1999), the sample suggests that shatter and simple flakes occur at a much higher frequency than complex flakes. The high percentage of large flakes also suggests that core reduction was the dominant activity at the site. The quality of the material helps to explain the high percentage of shatter. Many of the chert nodules are platy or tabular, indicating fracturing along bedding planes. To assess variables in material and flake type, artifacts were classified into size grades (Table III.14). Although this table offers limited information because chert is dominant in the assemblage, it does show that shatter occurs at a higher frequency regardless of size. The Sullivan and Rosen (1985) system also suggests that core reduction was clearly the primary activity (based on the higher percentage of complete flakes and debris). Complete flakes are more indicative of the initial stages of core reduction, whereas debris can represent the remains of more intensive core reduction. The amount of debris is most likely a result of the quality of the material; i.e. poorer quality materials may take extended period of testing to get adequately sized pieces. The results of this analysis differ from those of Ahler and Smail (1999) in that the flake assemblage has high enough percentages of broken flakes and flake fragments (42%) to indicate that tool manufacturing also occurred. These interpretations represent the analysis of a sample of the artifacts at the site. Tool manufacturing may be more apparent in other areas of the site, but based on this sample, it seems likely that the chert nodules were being reduced and transported elsewhere. No temporally diagnostic tools were observed at this site, and it is likely that this source material was exploited continuously throughout the prehistoric occupation of FCMR. A sample, showing the various colors was collected along with a biface fragment.

Statement of Significance: The site represents a large flaked-lithic artifact scatter related to prehistoric quarrying activities. The site has the potential to yield significant information on the research themes of prehistoric economies, settlement

Table III.12. Flaked-lithic Debitage, 5EP2916.

Material Type								Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone
Size								
>1/2"				4	1			5 (62.5%)
1/4" - 1/2"			1	1				2 (25%)
<1/4"				1				1 (12.5%)
Total (%)			1 (12.5%)	6 (75%)	1 (12.5%)			8 (100%)
Flake Type								
Shatter			1	1				2 (25%)
Simple				3				3 (37.5%)
Complex				2	1			3 (37.5%)
Bifacial Thinning								
Total (%)			1 (12.5%)	6 (75%)	1 (12.5%)			8 (100%)
Cortex								
Present				4				4 (50%)
Absent			1	2	1			4 (50%)
Total (%)			1 (12.5%)	6 (75%)	1 (12.5%)			8 (100%)
Flake Type (Sullivan and Rosen 1985)								
Complete				2				2 (25%)
Broken				2	1			3 (37.5%)
Flake Fragment				1				1 (12.5%)
Debris			1	1				2 (25%)
Total (%)			1 (12.5%)	6 (75%)	1 (12.5%)			8 (100%)

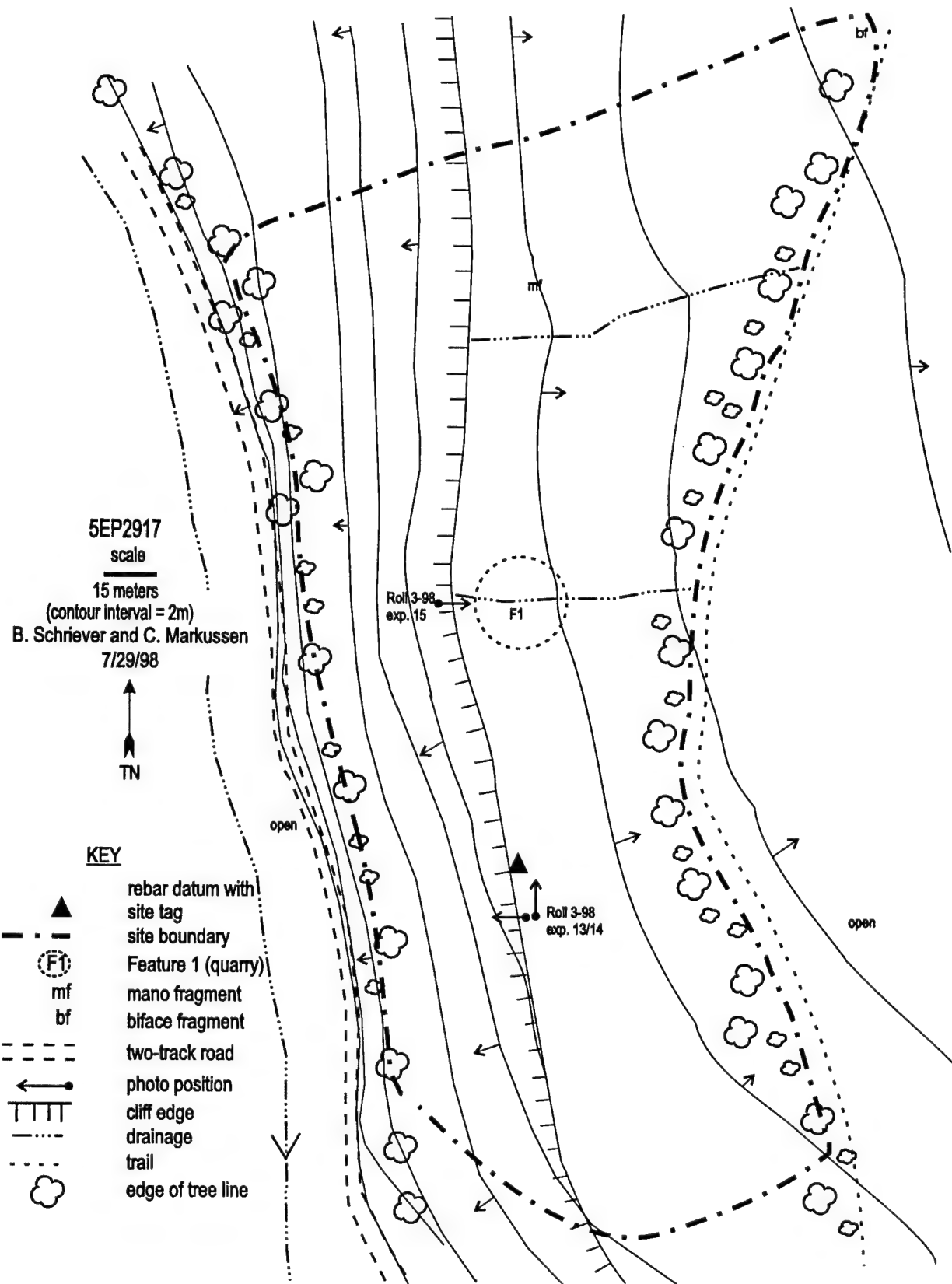


Figure III.15. Site Map, 5EP2917.

Table III.13. Flaked-lithic Debitage, 5EP2917

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			1	119			4			124 (83.2%)
1/4"-1/2"				23			2			25 (16.8%)
<1/4"										
Total (%)			1 (.7%)	142 (95.3%)			6 (4%)			149 (100%)
Flake Type										
Shatter			1	74			5			80 (53.7%)
Simple				46			1			46 (31.5%)
Complex				22						22 (14.8%)
Bifacial Thinning										
Total (%)			1 (.7%)	142 (95.3%)			6 (4%)			149 (100%)
Cortex										
Present				45			1			45 (30.9%)
Absent			1	97			5			103 (69.1%)
Total (%)			1 (.7%)	142 (95.3%)			6 (4%)			149 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete				5						5 (3.3%)
Broken				21						21 (14.1%)
Flake Fragment				42						42 (28.2%)
Debris			1	74			6			81 (54.4%)
Total (%)			1 (.7%)	142 (95.3%)			6 (4%)			149 (100%)

Table III.14. Flaked-lithic Debitage by Size Grade, 5EP2917.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	58 (48.7%)	40 (33.6%)	21 (17.7%)		119 (96%)
Orthoquartzite					
Chalcedony					
Quartzite	1 (100%)				1 (0.8%)
Quartz	3 (75%)	1 (25%)			4 (3.2%)
Silicified Wood					
Other					
Total	62 (50%)	41 (33.1%)	21 (16.9%)		124 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	16 (69.6%)	6 (26.1%)	1 (4.3%)		23 (92%)
Orthoquartzite					
Chalcedony					
Quartzite					
Quartz	2 (100%)				2 (8%)
Silicified Wood					
Other					
Total	18 (72%)	6 (24%)	1 (4%)		25 (100%)

patterns, chronology and cultural relationships, and technologies as defined in the CRMP (Zier et al. 1997).

Management Recommendation: Sign and Avoid. This site is recommended for permanent site protection. The site is not being impacted by erosion, but avoidable military activity is threatening the site.

5EP2918

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6430 ft (1960 m) asl

Aspect: 180 ° Slope: 5 °

Site Dimensions: 14 m E/W x 24 m N/S

This site is a small flaked-lithic artifact scatter situated on the south slope of a high hill (Figure III.16). The site is bounded on the west by a small, unnamed erosional drainage. The site surface contains numerous small washes and other erosional features. The vegetation on the site is yucca, bunch grass and juniper, while the surrounding area is prairie grasses, riparian forms in the larger drainages, as well as pinon and juniper scrub. The soil is a gray clay that is up to 100 cm deep. Sheet erosion and slope wash have impacted the site.

A total of nineteen artifacts was noted. No diagnostic artifacts were located. Eighteen flakes were analyzed in the field (Table III.15) and one chert core fragment was noted. The small number of flakes limits the inferences that can be drawn from the assemblage. The types of flakes, the number of large flakes, and the presence of a core fragment could suggest more of a reliance on core reduction. Analysis of the assemblage following Sullivan and Rosen (1985) shows no significant difference in emphasis between core reduction activities and tool manufacturing activities. The cultural affiliation and age is unknown.

Statement of Significance: Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2919

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6390 ft (1948 m) asl

Aspect: 270 ° Slope: 15 °

Site Dimensions: 5 m N/S x 6 m E/W

This small site consists entirely of five flakes and is located on a small bench on the west slope of a narrow north/south-trending ridge (Figure III.17). The site is on a fairly steep slope just above an even steeper portion of slope. There is a terrace one-quarter of the way down from the ridge top to the east. Minor drainages border all but the east side of the site. There is a boulder scatter near the top of the ridge. From the site there is a good view of an adjacent drainage and valley to the west. The on-site vegetation is pinon and juniper with sporadic squawbush. Open grasslands are to the west. Sediments are a red, gravelly silty clay mixed with small gravels, that are less than 10 cm deep. The area has been severely impacted by slope wash.

The five flakes were analyzed in the field (Table III.16). The inferred activity is lithic reduction. The small number of flakes limits the inferences that can be drawn from the assemblage. The cultural affiliation and age are unknown because of the sparse information, and lack of diagnostic material.

Statement of Significance: The site has little potential for further information due to the small number of artifacts and the low potential for buried cultural material. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

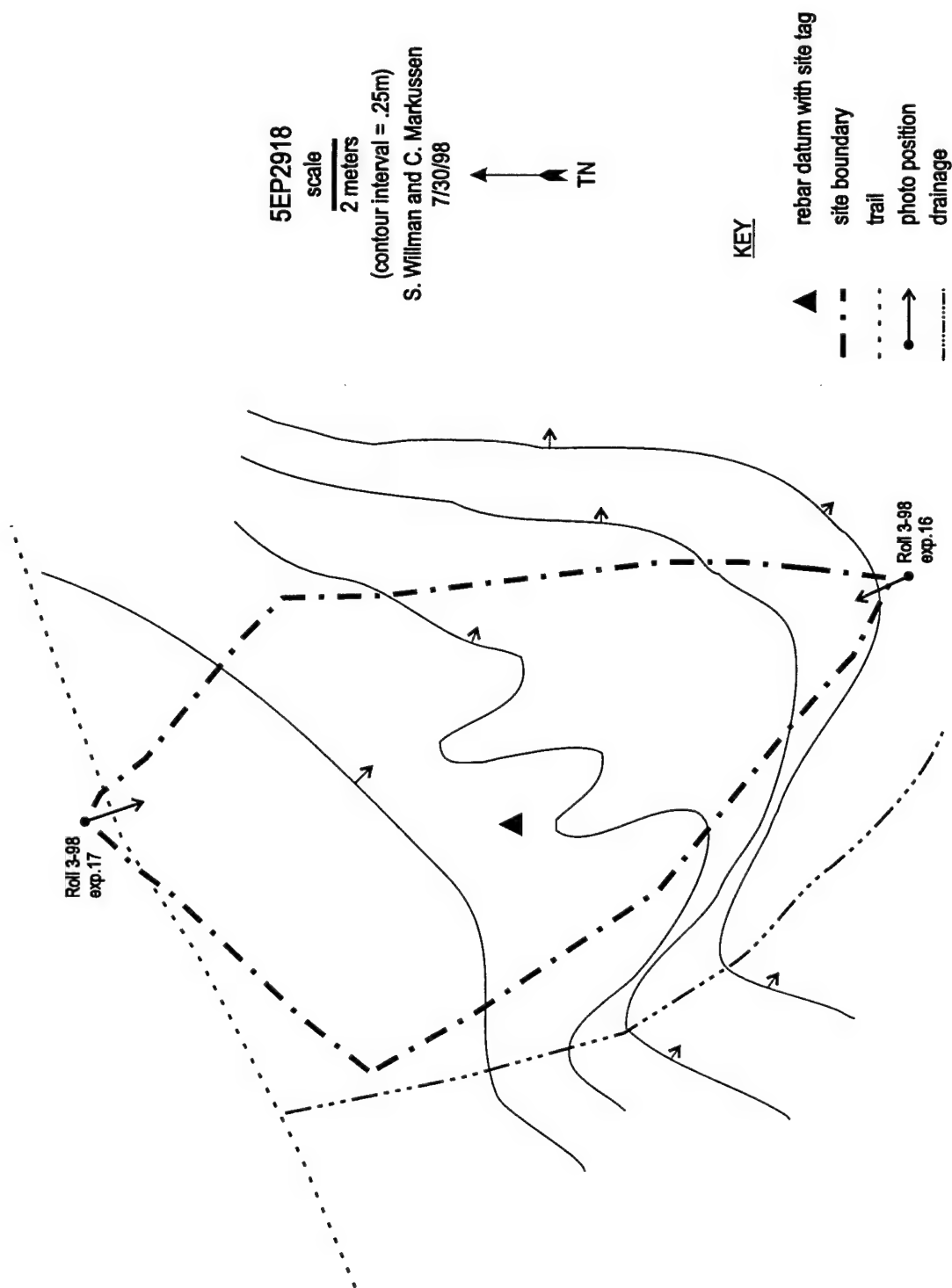


Figure III.16. Site map, 5EP2918.

Table III.15. Flaked-lithic Debitage, 5EP2918.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"	1		2	14						17 (94.4%)
1/4"-1/2"				1						1 (5.6%)
<1/4"										
Total (%)	1 (5.6%)		2 (11.1%)	15 (83.3%)						18 (100%)
Flake Type										
Shatter			1	7						8 (44.4%)
Simple	1		1	4						6 (33.3%)
Complex				2						2 (11.1%)
Bifacial Thinning				2						2 (11.1%)
Total (%)	1 (5.3%)		2 (10.5%)	156 (84.2%)						18 (100%)
Cortex										
Present				4						5 (26.3%)
Absent	1		2	11						14 (73.7%)
Total (%)	1 (5.6%)		2 (11.1%)	15 (83.3%)						19 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete				1						1 (5.6%)
Broken				4						4 (22.2%)
Flake Fragment	1		1	3						5 (27.8%)
Debris			1	7						8 (44.4%)
Total (%)	1 (5.6%)		2 (11.1%)	16 (83.3%)						18 (100%)

Table III. 16. Flaked-lithic Debitage, 5EP2919.

Material Type									Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone	
Size									
>1/2"			1	4					5 (100%)
1/4"-1/2"									
<1/4"									
Total (%)			1 (20%)	4 (80%)					5 (100%)
Flake Type									
Shatter				2					2 (40%)
Simple			1	1					2 (40%)
Complex				1					1 (20%)
Bifacial Thinning									
Total (%)			1 (20%)	4 (80%)					5 (100%)
Cortex									
Present									
Absent			1	4					5 (100%)
Total (%)			1 (20%)	4 (80%)					5 (100%)
Flake Type (Sullivan and Rosen 1985)									
Complete									
Broken									
Flake Fragment			1	2					3 (60%)
Debris				2					2 (40%)
Total (%)			1 (20%)	4 (80%)					5 (100%)

5EP2920

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6450 ft (1966 m) asl

Aspect: 270 ° Slope: 2 °

Site Dimensions: 78 m N/S x 24 m E/W

The site is on a north/south-trending ridge in a shallow, small elongated draw between two high grassy areas of a ridge (Figure, III.18). Both higher areas command good views (one east, the other west), and the draw has a good view of valleys south of the site. The vegetation consists of pinon, juniper, bunch grass, squawbush, and scrub oak. The soil is a red silty clay with large amounts of gravel. Despite the gravels, it has 15 cm or more of soil deposition. The site has some erosional damage and has been subjected to military foot traffic (foot path).

A total of one-hundred and three artifacts was identified. Observed lithic tools included a limestone chopper, a large chert patterned biface and a chert projectile point base. Ninety-nine flaked-lithic artifacts were analyzed in the field (Table III.17). One quartzite metate fragment was also located.

The collected projectile point base dates the site to the Early to Middle Ceramic periods (AD 500-AD 1400). This date derives from the morphology of the projectile point, which is similar to Category P48, (Lintz and Anderson 1987:170-171). The assemblage suggests a variety of activities: food processing based on the metate, hunting based on the projectile point, and lithic reduction based on the flakes. Orthoquartzite and chert account for over seventy-six percent of all analyzed flakes. Both debitage analyses used to interpret the flake assemblage indicate that core reduction and tool production occurred, but they differ in regard to which is the more dominant activity. Using Ahler and Smail (1999), the high percentage of large flakes and the high number of simple flakes could be interpreted as indicating that core reduction was the primary activity at the site. The large number of flakes without cortex suggest that middle stages of core reduction were as prevalent as early stages of core reduction. The flake assemblage was also broken down by size grade (Table III.18) to examine the variables of material type and flake type. Simple flakes are the most dominant flake type by size grade. Complex and simple chert flakes are nearly equal in frequency suggesting that chert material was initially reduced elsewhere. Latter stages of chert reduction and tool production occurred to some extent at the site. One large, chert bifacial-thinning flake was documented at the site.

The Sullivan and Rosen (1985) system suggests that tool manufacturing was the primary activity at the site based on the higher percentage of broken flakes and flake fragments, which is interpreted as the result of tool manufacturing. The flake assemblage suggests that while tool manufacturing is more prevalent, core reduction activities also occurred. Complete flakes and debris account for thirty-six percent of the assemblage.

Statement of Significance: The site has the potential to yield significant information on the research themes of prehistoric economies, settlement patterns, and chronology and cultural relationships as outlined in the CRMP (Zier et al. 1987). The site has the potential for further information based on the variety and number of artifacts and the possibility of at least shallow cultural deposition.

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggests a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5EP2921

Site Type: Historical Homesteading/Agriculture-Related Habitation Site

Elevation: 6365 ft (1940 m) asl

Aspect: 360° Slope: 1°

Site Dimensions: 17 m SW/NE x 64 m NW/SE

The site consists of five historic features and an associated artifact scatter located in an open and relatively flat area bordered by a woodland to the north and east (Figure III.19). A small unnamed ephemeral drainage (within the woods)

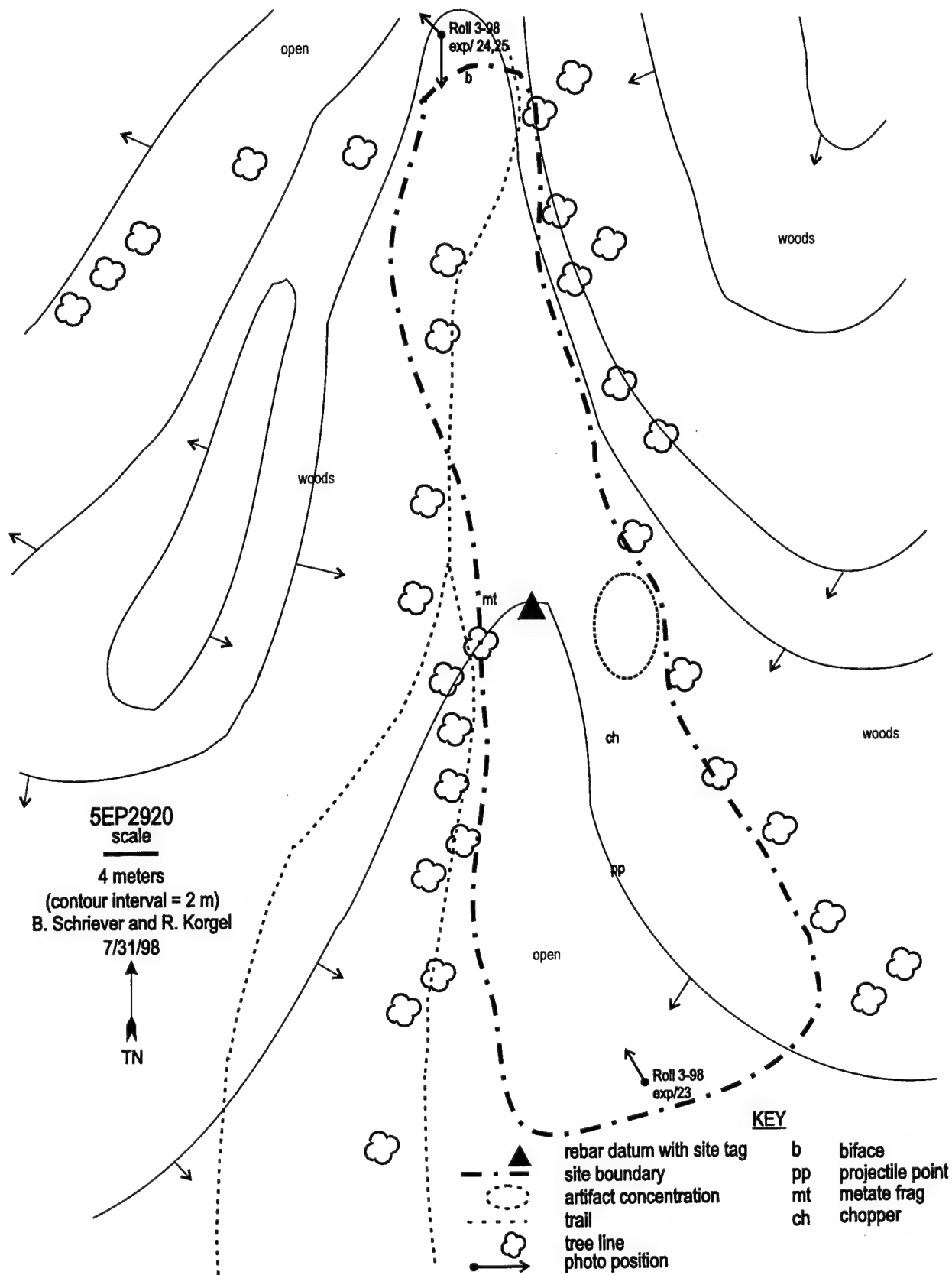


Figure III.18. Site map, 5EP2920

Table III.17. Flaked-lithic Debitage, 5EP2920.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Argillite		
Size										
>1/2"	13	6	22	39			2	1		83 (83.8%)
1/4"-1/2"	1		4	10						15 (15.2%)
<1/4"				1						1 (1%)
Total (%)	14 (14.1%)	6 (6.1%)	26 (26.3%)	50 (50.5%)			2 (2%)	1 (1%)		99 (100%)
Flake Type										
Shatter	5	4	4	19				1		33 (33.3%)
Simple	6	2	18	16			2			44 (44.5%)
Complex	3		4	14						21 (21.2%)
Bifacial Thinning				1						1 (1%)
Total (%)	14 (14.1%)	6 (6.1%)	26 (26.3%)	50 (50.5%)			2 (2%)	1 (1%)		99 (100%)
Cortex										
Present	1		5	15				1		22 (22.2%)
Absent	13	6	21	35			2			77 (77.8%)
Total (%)	14 (14.1%)	6 (6.1%)	26 (26.3%)	50 (50.5%)			2 (2%)	1 (1%)		99 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			3							3 (3%)
Broken	6		5	11			1			23 (23.2%)
Flake Fragment	3	2	14	20			1			40 (40.4%)
Debris	5	4	4	19				1		33 (33.3%)
Total (%)	14 (14.1%)	6 (6.1%)	26 (26.3%)	50 (50.5%)			2 (2%)	1 (1%)		99 (100%)

Table III.18. Flaked-lithic Debitage by Size Grade, 5EP2920.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	15 (38.4%)	11 (28.2%)	12 (30.8%)	1 (2.6%)	39 (47%)
Orthoquartzite	4 (18.2%)	15 (68.2%)	3 (13.6%)		22 (26.5%)
Chalcedony					
Quartzite	4 (66.7%)	2 (33.3%)			6 (7.2%)
Quartz		2 (100%)			2 (2.4%)
Basalt	5 (38.5%)	5 (38.5%)	3 (23%)		13 (15.7%)
Argillite	1 (100%)				1 (100%)
Total	29 (34.9%)	35 (42.2%)	18 (21.7%)	1 (1.2%)	83 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	3 (30%)	5 (50%)	2 (20%)		10 (66.7%)
Orthoquartzite		3 (75%)	1 (25%)		4 (26.7%)
Chalcedony					
Quartzite					
Quartz					
Basalt					
Argillite		1 (100%)			
Total	3 (20%)	9 (60%)	3 (20%)		15 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert		1 (100%)			1 (100%)
Orthoquartzite					
Chalcedony					
Quartzite					
Quartz					
Basalt					
Argillite					
Total		1 (100%)			1(100%)

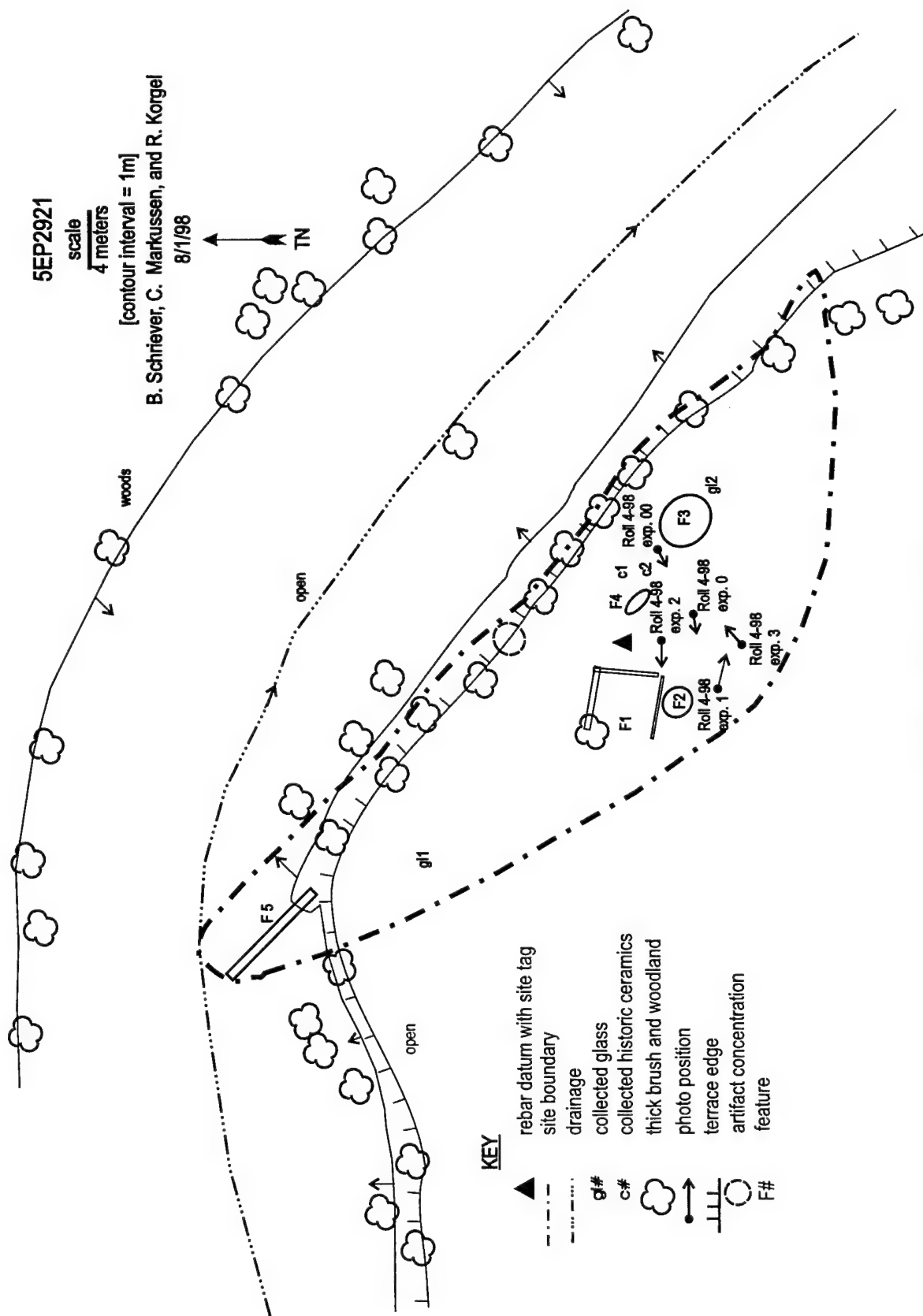


Figure III.19. Site Map, 5EP2921.

is adjacent to the site. A low ridge line is visible to the west. The vegetation includes bunch grass, juniper, pinon, and ponderosa pine. The sediments consist of a reddish-brown sandy silt that is at least 20 cm deep. The site is subject to general deterioration and filling of the observed features as well as to minor erosion. The area is vulnerable to recreational damage.

Five features were defined. Feature 1 (Figure III.20) is a house foundation that measures 17.4' x 19.7'. The partial foundation outline consists of a single course of granite. The foundation is adjacent and directly north of Feature 2, which is a depression that measures 16.4' x 9.8'. Feature 3 is also a depression and measures 16.5' x 16.5'. The function of the depressions is not known but could represent the remains of a root cellar. Feature 4 is located between Feature 3 and Feature 1 and is an elongated pile of granite that measures 11' x 3'. A few stones were removed and then a trowel was used to probe the first few inches of sediments. The probe did not encounter anything cultural and the stones were put back in place. The test was done to determine if the pile represented a grave and it does not. Feature 5 is a twenty-three foot long linear pile of granite adjacent to the drainage and may represent the remains of a check dam.

A total of fifty-three artifacts was inventoried. Glass, ceramic, and a few metal artifacts were noted. Glass artifacts account for over half of all observed artifacts. Clear bottle glass (16), solarized glass (14), and two pieces of milkglass were identified. Two clear glass bottle bases were collected to identify the maker's mark. One was manufactured by Adolphus Busch Glass Manufacturing Company, and it originally contained beer. The bottle was probably made between 1886 and 1928 (Toulouse 1971:26-27). No mold seams were present. The other base is part of an embossed panel with the words ROO...KIDNEY...LIVER...BLAD... The bottle probably contained some type of patent medicine. No bottle finishes are present. Ceramic artifacts include porcelain (8), whiteware (7), and white stoneware (2). The porcelain was undecorated, but a few of the whitewares have hand-painted designs. One piece of transferware was also noted. One piece of the hand-painted whiteware and the transferware were collected. The metal artifacts include one five-inch dinner spoon and parts of two cans. One of the cans is a four-inch square can and the other was an eleven inch in diameter round can. Both cans have crimped seams.

Frederick G. Johnston took out a homestead patent on 120 acres on June 22, 1897 which was canceled on December 18, 1899. A second homestead patent was taken out by Frank Cross on October 4, 1900 (Zier et al. 1987 Appendix E).

The site represents at least a temporary historic habitation. The paucity of historic artifacts may suggest limited use of the site. It is also possible that historic trash generated at the site was washed away by dumping it in the drainage or simply hauled away. The ethnic affiliation of the inhabitants is not known.

Statement of Significance: This site is in good condition with observable features and structure depressions. Archaeological information on the early ranching/homesteading era at Fort Carson is rare, and these sites are often susceptible to erosion and destruction. As the number of these sites decreases, their research potential increases. The site has the potential to yield significant information on the historical research theme of homesteading and agricultural settlement as outlined in the CRMP (Zier et al. 1997).

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggests a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5EP2922

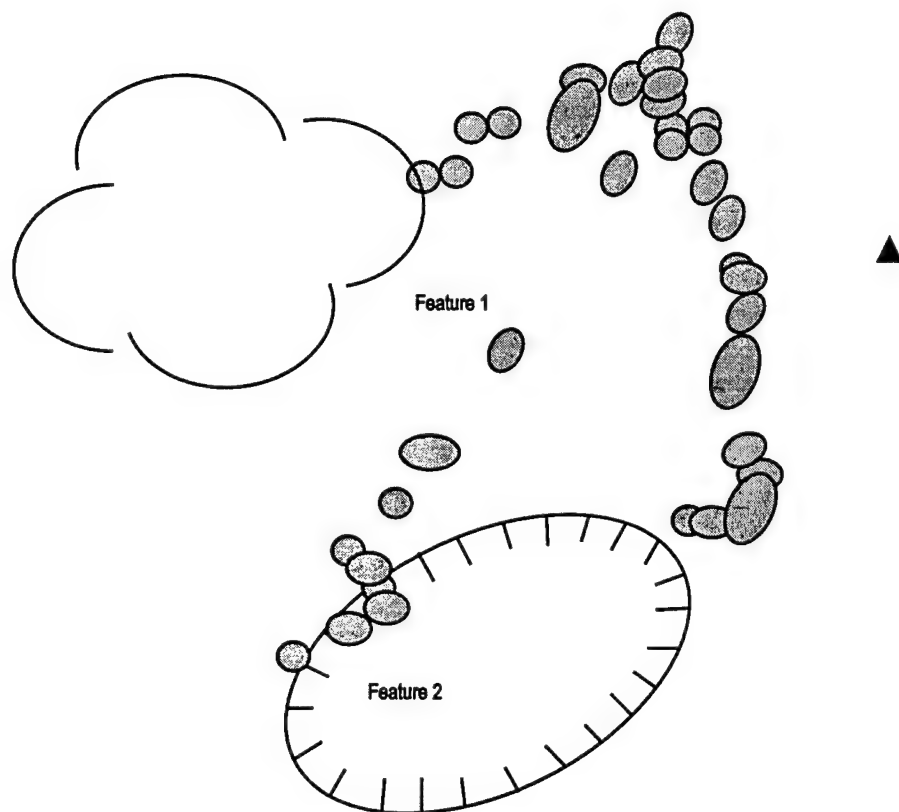
Site Type: Prehistoric Open Site Lacking Features

Elevation: 6470 ft (1972 m) asl

Aspect: 135 ° Slope: 1 °

Site Dimensions: 13 m E/W x 10 m N/S

This site is a sparse scatter of flakes and three flaked-lithic tools. It is located on the north side of a saddle (Figure III.21) along a narrow north/south-trending ridge that separates Little Turkey Creek and Turkey Creek. Bedrock is exposed along the ridge top. The vegetation on the site consists of scrub oak, pinon, juniper, grasses, and prickly pear cactus. The soil



5EP2921
Feature 1 and Feature 2
scale
1 meter
K. Heidemann and J. Hall
8/1/98



KEY

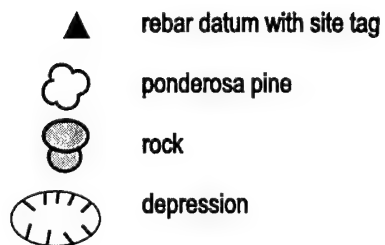


Figure III.20 . Feature 1 and 2, 5EP2921.

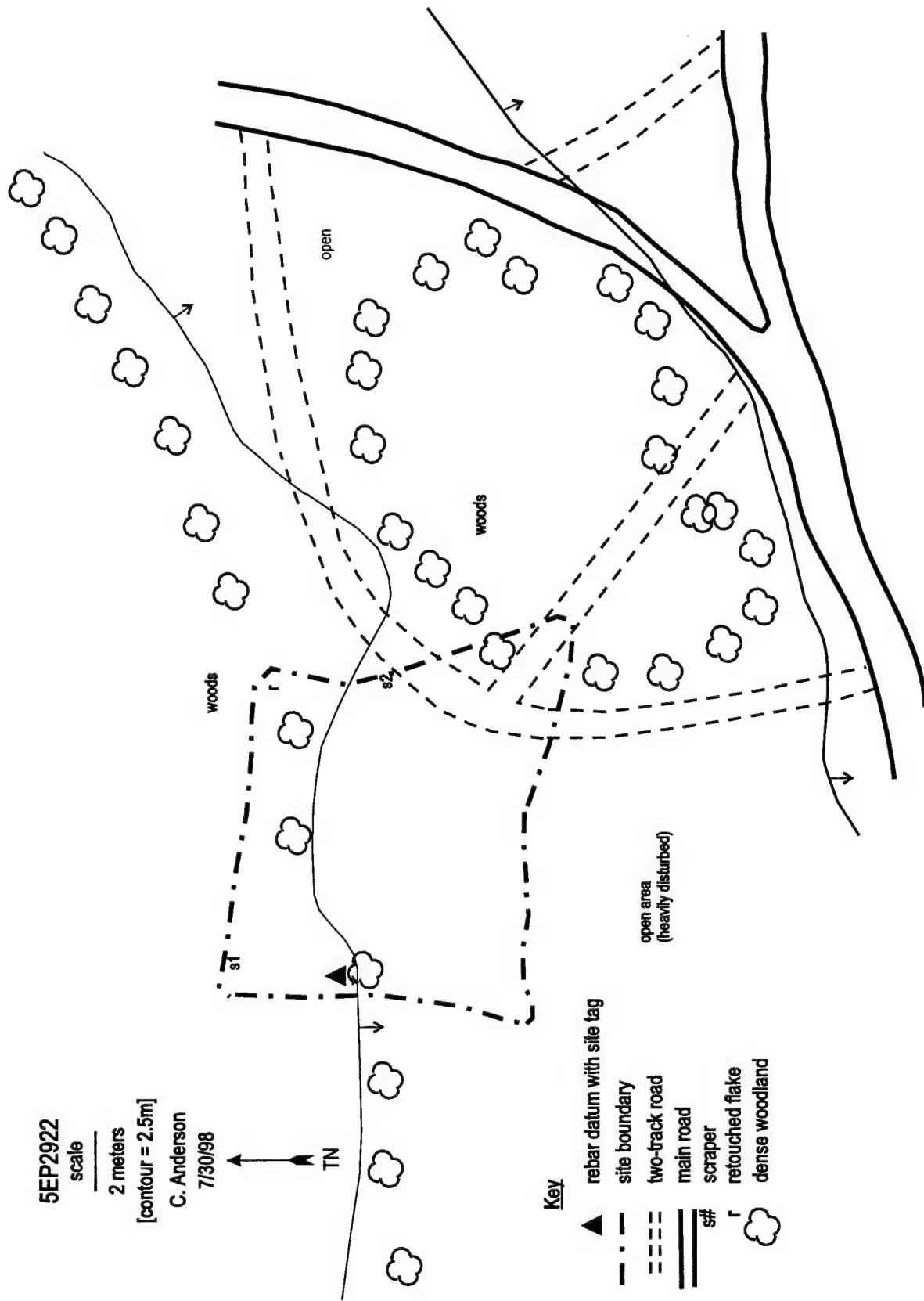


Figure III.21. Site Map 5EP2922.

is a gravelly silty sand and indicate only about 15 cm of soil depth above a gravelly substratum. The site area has been heavily impacted by military vehicular traffic as indicated by numerous vehicle trails and roads in the area.

A total of seventeen artifacts was observed in an area that has been heavily disturbed by the military. The total artifact assemblage includes one chert scraper, one silicified wood scraper, one chert bifacially retouched flake, one chert core fragment, and thirteen flakes (Table III.19). The scrapers and the retouched flake were collected. All observed lithic raw materials can be locally obtained. The small assemblage suggests that the site was marginally occupied with possible tool usage, limited core reduction, and tool manufacture. The cultural affiliation and age of the site are unknown due to lack of temporally diagnostic material.

Statement of Significance: The lack of significant soil deposition, the amount of disturbance, and the small number of artifacts indicate that the site has little further information. All observed artifacts were analyzed and the three tools were collected. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2923

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6360 ft (1939 m) asl

Aspect: 225 ° Slope: 0-5 °

Site Dimensions: 13 m NW/SE x 4 m NE/SW

The site consists of a small flaked-lithic artifact scatter located on a small bench on the gradually eastern slope of a narrow north/south-trending ridge (Figure III.22). The bench is above Little Turkey Creek, which is approximately 200 m to the east. Most of the artifacts are exposed in an eroded area along the southern slope of the bench, but a few artifacts were noted above the bench. The vegetation of the site is scrub oak, juniper, pinon, grasses, prickly pear cactus, and mountain mahogany. The area to the east is open grassland. The soils are gravelly, and soil depth is only 20 cm, so there is little potential for subsurface remains. There is erosional and military disturbance within the site.

Twenty-four artifacts were observed. The retouched flake was collected. The remaining lithic artifacts were analyzed in the field (Table III.20). The total artifacts included one unifacially retouched flake and twenty-three flakes. The site represents a temporary camp where limited core reduction and tool manufacturing took place. All observed lithic raw materials can be locally obtained. The small number of flakes limits the inferences that can be drawn from the assemblage. The cultural affiliation and period are unknown due to a lack of diagnostic artifacts.

Statement of Significance: The site has no further research potential based on the small number of artifacts and the low potential for buried cultural deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2924

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6010 ft (1832 m) asl

Aspect: 45 ° Slope: 4 °

Site Dimensions: 21 m NE/SW x 11 m NW/SE

This site is a dense flaked-lithic procurement area that has numerous flakes, cores, and fragments of tested orthoquartzite. It is located on the east end of a toe ridge overlooking a drainage through Rule Canyon (Figure III.23). The site is primarily centered around an outcrop of orthoquartzite on the slope of the toe ridge and extends from a wooded area to just inside an open grassland setting that follows along a small drainage. The vegetation of the site includes pine, mountain mahogany, yucca, juniper, grasses, prickly pear cactus, and buckwheat. The area to the east and northeast is open grassland. The eastern portion of the site has numerous sandstone gravels. One partially buried core indicates the

Table III.19. Flaked-lithic Debitage, 5EP2922.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	2	3	1	2	2			11 (84.6%)
1/4"-1/2"		1			1					2 (15.4%)
<1/4"										
Total (%)		2 (15.4%)	2 (15.4%)	3 (23%)	2 (15.4%)	2 (15.4%)	2 (15.4%)			13 (100%)
Flake Type										
Shatter				1						1 (7.7%)
Simple			1		1		1			3 (23%)
Complex		2	1	2	1	2	1			9 (69.3%)
Bifacial Thinning										
Total (%)		2 (15.4%)	2 (15.4%)	3 (23%)	2 (15.4%)	2 (15.4%)	2 (15.4%)			13 (100%)
Cortex										
Present		1		2	1	1				5 (38.5%)
Absent		1	2	1	1	1	2			8 (61.5%)
Total (%)		2 (15.4%)	2 (15.4%)	3 (23%)	2 (15.4%)	2 (15.4%)	2 (15.4%)			13 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1		1						2 (15.4%)
Broken			2		1	2	2			7 (53.9%)
Flake Fragment		1		1	1					3 (23%)
Debris				1						1 (7.7%)
Total (%)		2 (15.4%)	2 (15.4%)	3 (23%)	2 (15.4%)	2 (15.4%)	2 (15.4%)			13 (100%)

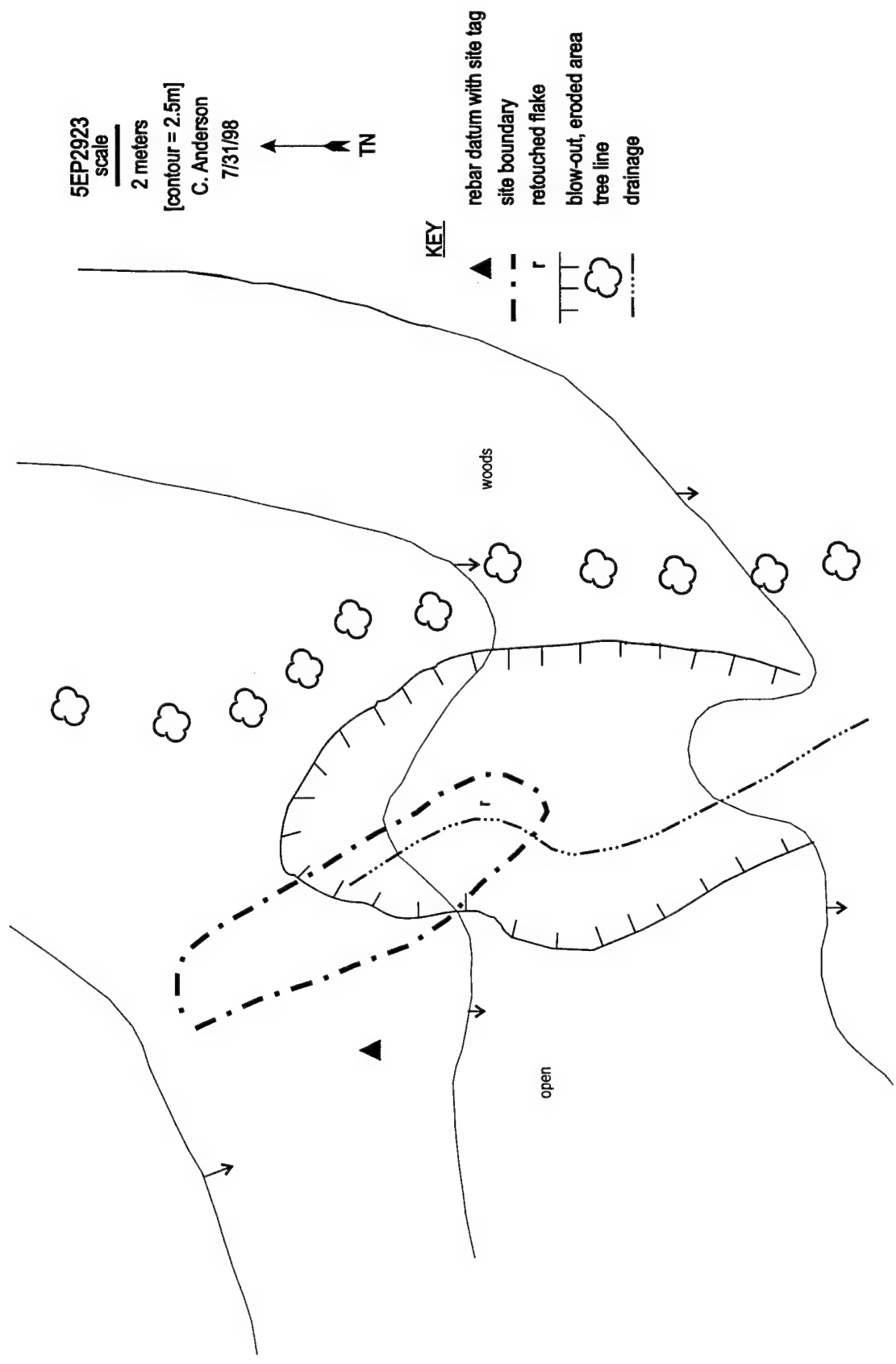


Figure III.22. Site Map, 5EP2923.

Table III.20. Flaked-lithic Debitage, 5EP2923.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		5		7			1			13 (56.5%)
1/4" - 1/2"		2		7			1			10 (43.5%)
<1/4"										
Total (%)		7 (30.4%)		14 (60.9%)			2 (8.7%)			23 (100%)
Flake Type										
Shatter				4						4 (17.4%)
Simple		5		4			2			11 (47.8%)
Complex		2		6						8 (34.8%)
Bifacial Thinning										
Total (%)		7 (30.4%)		14 (60.9%)			2 (8.7%)			23 (100%)
Cortex										
Present		5		8			1			14 (50.9%)
Absent		2		6			1			9 (39.1%)
Total (%)		7 (30.4%)		14 (60.9%)			2 (8.7%)			23 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		3		7			2			12 (52.2%)
Broken		2								2 (8.7%)
Flake Fragment		2		3						5 (21.7%)
Debris				4						4 (17.4%)
Total (%)		7 (30.4%)		14 (60.9%)			2 (8.7%)			23 (100%)

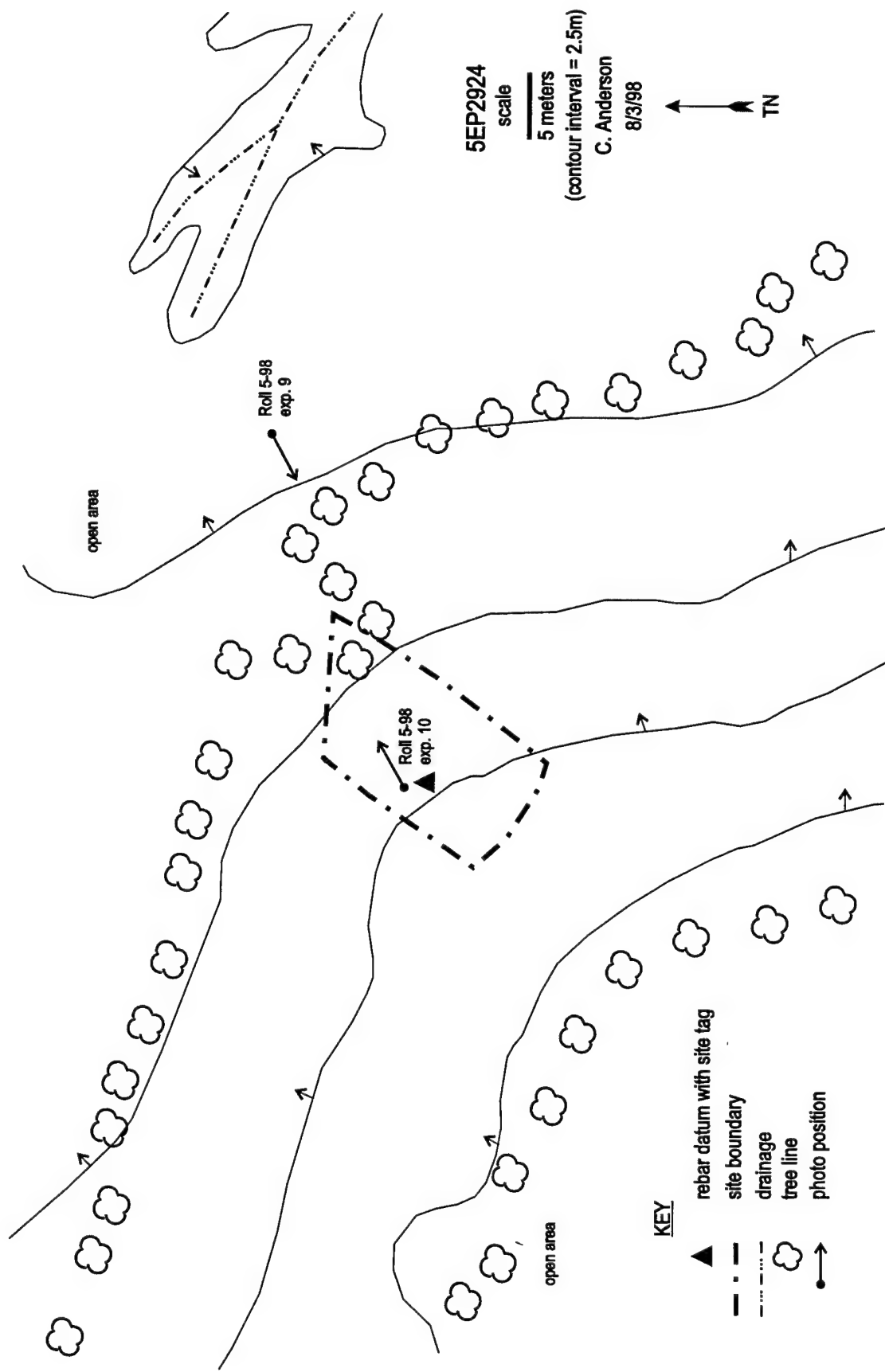


Figure III.23. Site Map, 5EP2924.

potential for at least a shallow buried cultural deposit. The soil is a gravelly silty sand with a depth of 15 cm. There is some impact to the site from erosion, and a light scatter of military debris is present as well.

A sample of the artifacts was analyzed in the field (Table III.21). It is estimated that at least three hundred artifacts are exposed on the surface. No temporally diagnostic artifacts were observed. The artifacts included in an analysis sample include 141 orthoquartzite flakes, 1 chalcedony flake, and 8 orthoquartzite cores/tested cobbles. The site represents the location of a prehistoric quarry where a local outcrop of orthoquartzite was exploited. Raw material procurement and core reduction are the inferred activities. Both debitage analyses used to interpret the sample indicate that core reduction was the primary activity at the site. According to Ahler and Smail (1999), the sample shows that simple flakes occur at a higher frequency than complex flakes. The high percentage of large flakes also suggests that early stages of core reduction were a dominant activity at the site. Orthoquartzite outcrops naturally here, but the quality of some of the material is poor, which helps to explain the relatively high percentage of shatter. Sixty-five percent of the flakes have cortex. The presence of eight cores/tested cobbles also indicates that material was being prepared for transportation elsewhere. Other outcrops of orthoquartzite were noted in the general area, but apparently it is only at this particular dense outcrop that the quality is usable. The flake assemblage was also broken down by size grade to look at the variables of material type and flake type (Table III.22). This table shows that shatter occurs at equal amounts to the other flake types.

The Sullivan and Rosen (1985) system suggests that core reduction was clearly the primary activity based on the higher percentage of complete flakes and debris. Complete flakes are more indicative of initial stages of core reduction, whereas debris can represent the remains of more intensive core reduction. The amount of debris is most likely a result of the poor quality of the material that might take an extended period of testing to get an adequately sized piece of orthoquartzite. The results of this analysis differs from that of Ahler's approach in that the flake assemblage has a moderate percentage of broken flakes and flake fragments, indicating that tool manufacturing also occurred. Broken flakes and flake fragments account for twenty-five percent of the assemblage. These interpretations represent the analysis of a sample of the artifacts at the site. Tool manufacturing may be more apparent in other areas, but based on the size of the site, and the sample, it is likely that orthoquartzite was being partially reduced on site and taken elsewhere. Cultural affiliation and age are unknown due to lack of temporally diagnostic artifacts at the site.

Statement of Significance: The site has the potential to yield significant information on the themes of chronology and cultural relationships, settlement patterns, prehistoric economies, and technologies outlined in Zier et al. 1997 (CRMP). The site provides the opportunity to learn more about prehistoric quarrying activities. Although small in size, the site has numerous artifacts, while partially buried artifacts suggest that at least a shallow cultural deposit is present.

Management Recommendation: Sign and Avoid. Surface evidence indicates that the site is eligible for nomination to the NRHP. Erosion and military impacts are perceived as minor and avoidable.

5EP2925

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6000 ft (1829 m) asl

Aspect: 135 ° Slope: 4 °

Site Dimensions: 5 m N/S x 2 m E/W

The site, a sparse scatter of flaked-lithic artifacts, is located on an eastern slope of a toe ridge overlooking and extending toward a drainage through Rule Canyon (Figure III.24). The vegetation on site consists of grasses, narrow leaf yucca, prickly pear cactus, buckwheat, pinon, and juniper. Artifacts are located on a gentle slope in a woodland area adjacent to a flat grassy area along the base of Rule Canyon. The surface is covered with small to large sandstone gravels. The gravelly sediments at the site are very shallow (15cm) silty sand, with little potential for buried cultural material. The site is subject to slope wash. Military debris and foxholes exist on the east side of the site.

A of ten artifacts, nine orthoquartzite flakes and one orthoquartzite core fragment was analyzed in the field (Table III.23).

Table III.21. Flaked-lithic Debitage, 5EP2924.

Material Type								Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone
Size								
>1/2"			116					116 (81.7%)
1/4"-1/2"			19		1			20 (14.1%)
<1/4"			6					6 (4.2%)
Total (%)			141 (99.3%)		1 (.7%)			142 (100%)
Flake Type								
Shatter			39					39 (27.5%)
Simple			57		1			58 (40.8%)
Complex			44					44 (31%)
Bifacial Thinning			1					1 (.7%)
Total (%)			141 (99.3%)		1 (.7%)			142 (100%)
Cortex								
Present			93					93 (65.5%)
Absent			48		1			49 (34.5%)
Total (%)			141 (99.3%)		1 (.7%)			142 (100%)
Flake Type (Sullivan and Rosen 1985)								
Complete			67					67 (47.2%)
Broken			20		1			21 (14.8%)
Flake Fragment			15					15 (10.6%)
Debris			39					39 (27.5%)
Total (%)			141 (99.3%)		1 (.7%)			142 (100%)

Table III.22. Flaked-lithic Debitage by Size Grade, 5EP2924.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	38 (32.8%)	38 (32.8%)	39 (33.6%)	1 (0.9%)	116 (100%)
Orthoquartzite					
Chalcedony					
Quartzite					
Quartz					
Silicified Wood					
Other					
Total	38 (32.8%)	38 (32.8%)	39 (33.6%)	1 (0.9%)	116 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert					
Orthoquartzite	1 (5.3%)	13 (68.4%)	5 (26.3%)		19 (95%)
Chalcedony		1 (100%)			1 (5%)
Quartzite					
Quartz					
Silicified Wood					
Other					
Total	1 (5%)	14 (70%)	5 (25%)		20 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert					
Orthoquartzite		6 (100%)			6 (100%)
Chalcedony					
Quartzite					
Quartz					
Silicified Wood					
Other					
Total		6 (100%)			6 (100%)

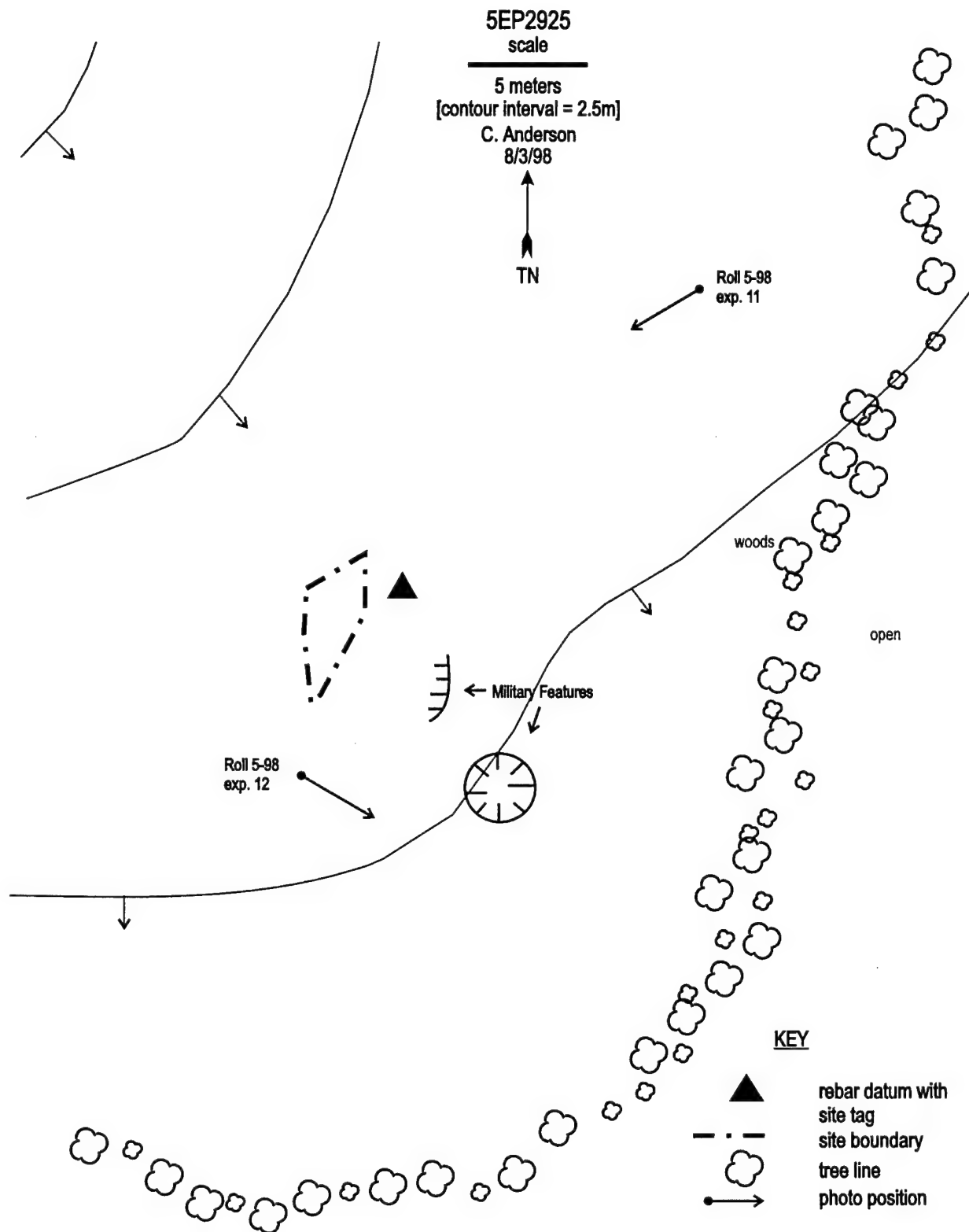


Figure III.24. Site Map, 5EP2925.

Table III.23. Flaked-lithic Debitage, 5EP2925.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			5							5 (55.6%)
1/4"-1/2"			3							3 (33.3%)
<1/4"			1							1 (11.1%)
Total (%)			9 (100%)							9 (100%)
Flake Type										
Shatter										
Simple			4							4 (44.4%)
Complex			5							5 (55.6%)
Bifacial Thinning										
Total (%)			9 (100%)							9 (100%)
Cortex										
Present			3							3 (33.3%)
Absent			6							6 (66.7%)
Total (%)			9 (100%)							9 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			3							3 (33.3%)
Broken			4							4 (44.4%)
Flake Fragment			2							2 (22.2%)
Debris										
Total (%)			9 (100%)							9 (100%)

The site probably represents a temporary locus for core-reduction activities of a local raw material. Orthoquartzite outcrops are common along Rule Canyon. The low number of artifacts limits the inferences that can be drawn from the artifact assemblage, and the lack of temporally diagnostic artifacts restricts the cultural affiliation or age to undetermined prehistoric.

Statement of Significance: The site has no further research potential based on the small number of artifacts and the low potential for buried cultural material. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5EP2926

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6010 ft (1832 m) asl

Aspect: 270 ° Slope: 3 °

Site Dimensions: 33 m NW/SE x 14 m NE/SW

This site is a sparse, flaked-lithic artifact scatter located on the west rim of the ridge separating Rule Canyon and Turkey Creek (Figure III.25). The surface of the site slopes gently toward the rim and is covered with small gravels. The site is in an open area with woodland beginning along the rim and continuing down the slope. The vegetation on the site is pine, juniper, yucca, grasses, and prickly pear cactus. The soil is a brown silty sand that is less than 10 cm deep. There is erosional disturbance at the site.

Nineteen flakes were analyzed in the field (Table III.24). The artifact assemblage is small with limited evidence for both core reduction and tool manufacturing. Nonetheless, the site represents a locus where lithic reduction of locally available raw materials took place. Because of the lack of temporally diagnostic artifacts, the cultural affiliation and period are undetermined.

Statement of Significance: The site lacks further research potential based on the sparse number of artifacts and the low potential for buried remains. All observed artifacts were analyzed. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

Fremont County

5FN1578

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6040 ft (1841 m) asl

Aspect: 200 ° Slope: 2 °

Site Dimensions: 32 m N/S x 21m E/W

The site consists of a fairly intensive concentration of flaked-lithic artifacts, which include tools as well as debitage and a single mano fragment. It is located on a gentle slope at the south end of a north/south-trending ridge between a large drainage to the east and a small drainage to the west (Figure III.26). The slope extends south/southeast to a bench 30 m south of the site and then continues south to a small valley. The vegetation on site is predominantly pinon and juniper with cholla, prickly pear cactus, yucca, serviceberry, bunch grass, and sunflowers. Sediments are a tan, gravelly sandy silt with a depth greater than 50 cm. The site is crossed by tracks from motorized traffic and there is evidence of some slope wash. Artifacts are mostly found in the open areas and in areas of military disturbance.

The total number of artifacts recorded is 160, which includes a sample of 150 flakes, two quartzite manuports, one silicified wood projectile point, two chert bifaces, one quartzite scraper, one chert utilized flakes, one chert retouched flake, one sandstone mano fragment, and one orthoquartzite core. The projectile point, the bifaces, the scraper, and the utilized flakes were collected. Local raw material types were utilized. Orthoquartzite and chert account for over eighty per cent

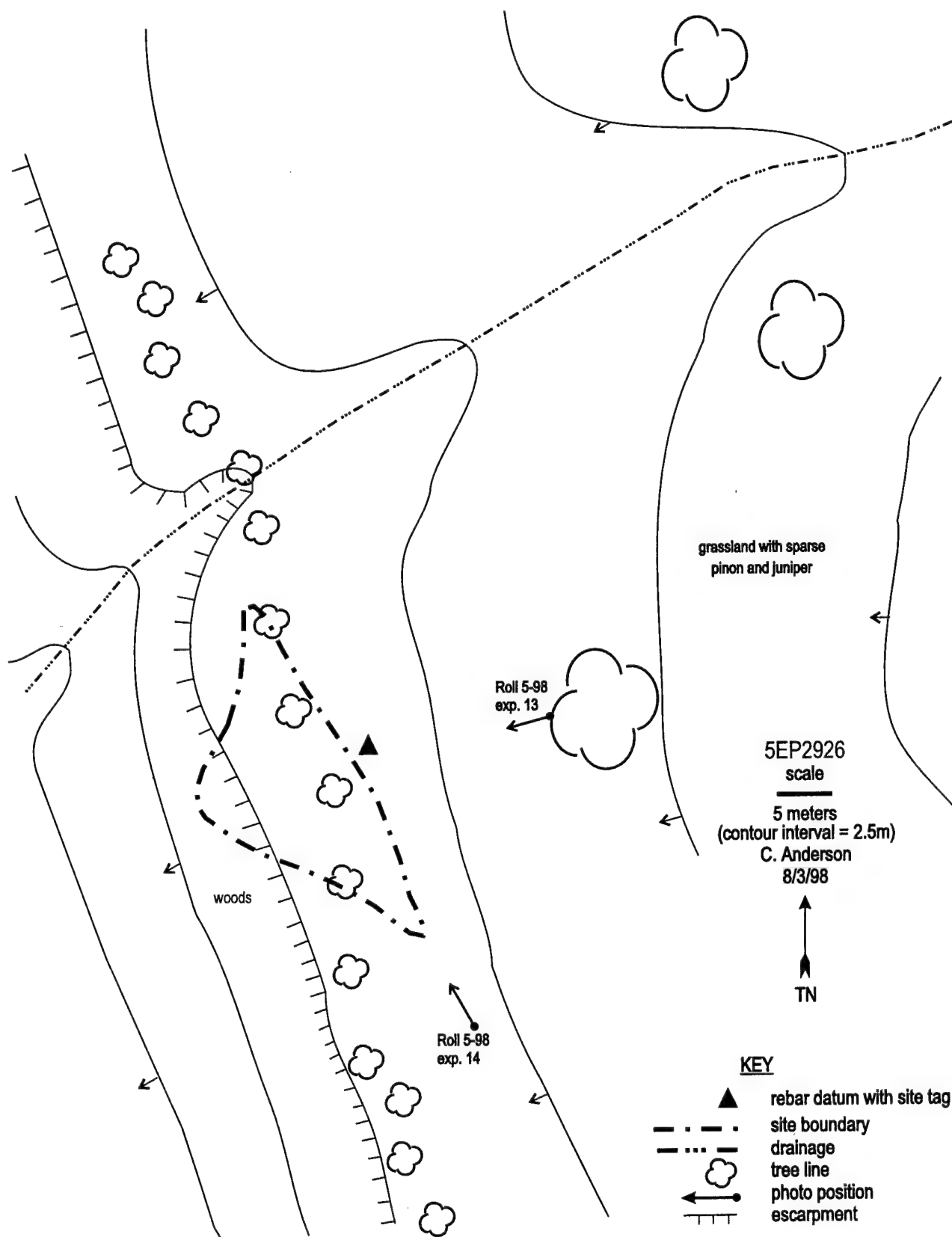


Figure III.25. Site Map, 5EP2926

Table III.24. Flaked-lithic Debitage, 5EP2926.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		2	12	1						15 (78.9%)
1/4"-1/2"			3			1				4 (21.1%)
<1/4"										
Total (%)		2 (10.5%)	15 (78.9%)	1 (5.3%)		1 (5.3%)				19 (100%)
Flake Type										
Shatter										
Simple			8							8 (42.1%)
Complex		2	7	1		1				11 (57.9%)
Bifacial Thinning										
Total (%)		2 (10.5%)	15 (78.9%)	1 (5.3%)		1 (5.3%)				19 (100%)
Cortex										
Present			8			1				9 (47.4%)
Absent		2	7	1						10 (52.6%)
Total (%)		2 (10.5%)	15 (78.9%)	1 (5.3%)		1 (5.3%)				19 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1	9	1		1				12 (63.2%)
Broken		1	6							7 (36.8%)
Flake Fragment										
Debris										
Total (%)		2 (10.5%)	15 (78.9%)	1 (5.3%)		1 (5.3%)				19 (100%)

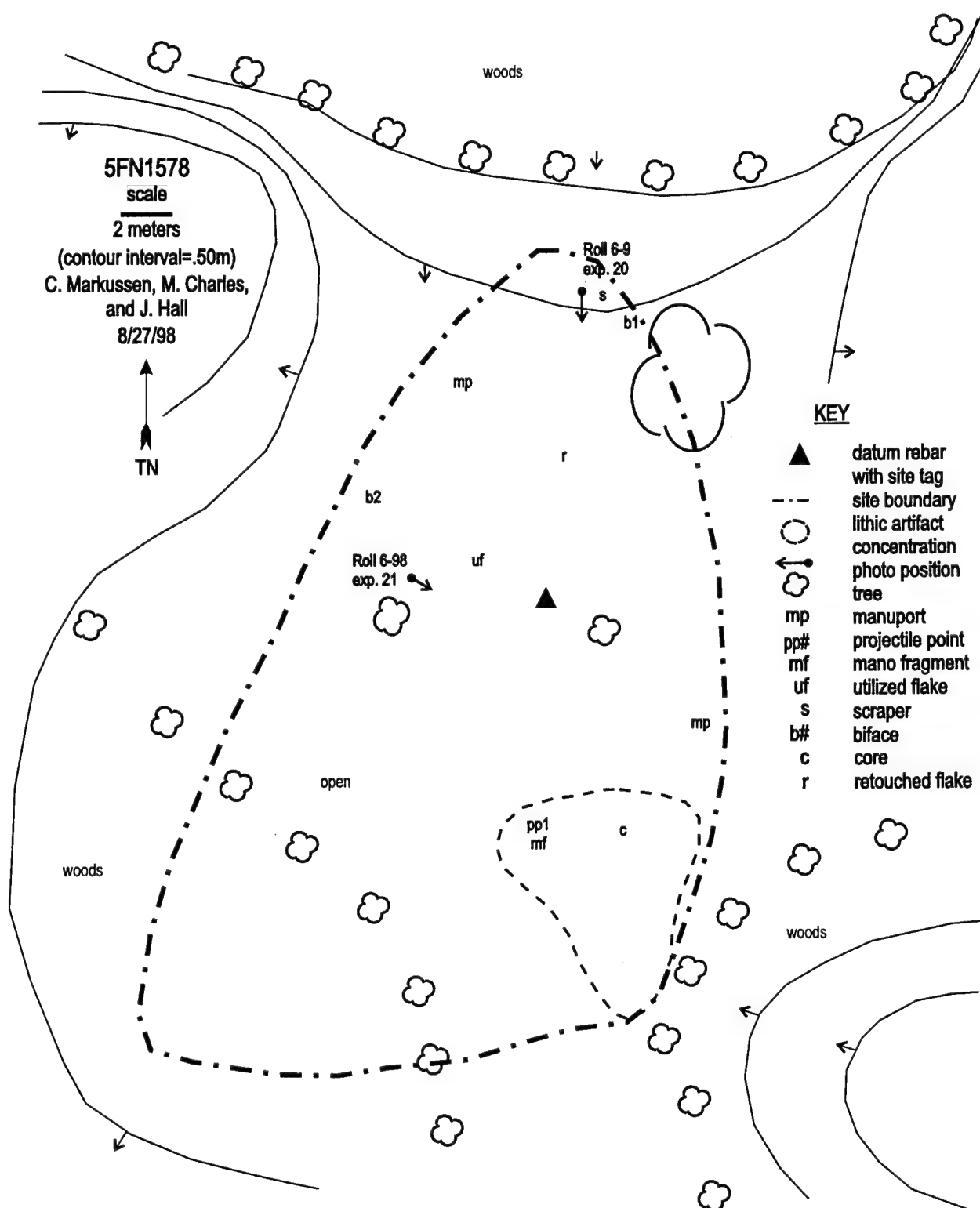


Figure III.26. Site Map, 5FN1578.

of all analyzed flakes (Table III.25). Both debitage analysis systems used to interpret the flake assemblage indicate that core reduction and tool production occurred, but the analyses differ in regard to which is the more dominant activity. Using Ahler and Smail (1999), the high number of large flakes, the relatively high number of simple flakes, and the high percentage of flakes with cortex suggest that core reduction was more important at the site. Orthoquartzite in particular has a high percentage of simple flakes by material type. The high number of complex flakes may indicate that middle stages of reduction are present as well as early stages. The flake assemblage was also broken down by size grade to look at the variables of material type and flake type (Table III.26). Complex flakes are more prevalent in Size Grade 2 and simple flakes are slightly more common in Size Grade 1. The higher percentage of Size Grade 2 complex chert flakes could indicate that chert was possibly used more for tool production. The higher number of Size Grade 1 simple orthoquartzite flakes suggests that core reduction of this material occurred at the site.

The Sullivan and Rosen (1985) system suggests that tool manufacturing and core reduction were equally important at the site, based on the percentages of the flake types. Broken flakes and flake fragments are interpreted as the result of tool manufacturing. Core reduction activities also occurred; complete flakes and debris are interpreted as a result of core reduction. The higher number of complete flakes indicates that initial stages of core reduction are more prevalent than intensive core reduction. The presence of a mano suggests that plant and animal processing may also have occurred at the site. The projectile point (Figure 7.2d) is similar to Category 42 (Lintz and Anderson 1989:187) and suggests that the site dates to the Early-Middle Ceramic (AD 600-1600).

Statement of Significance: The site is important because of the variety of artifact types, the number of artifacts, and the potential for intact sediment deposits. Despite military disturbance, sediments appear to be stable. The site could yield significant data on prehistoric economies, prehistoric settlement patterns, and chronological and cultural relationships, as defined in the CRMP (Zier et al. 1997).

Management Recommendation: Avoid and Test. The site has been impacted by military maneuvers and some erosion. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggests a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified.

5FN1579

Site Type: Prehistoric Sheltered Site

Elevation: 6020 ft (1835 m) asl

Aspect: 320° Slope: 5-20°

Site Dimensions: 13.5 m NE/SW x 3.5 m NW/SE

This site consists of a rock alcove on the east side of an unnamed intermittent drainage (Figure III.27) that flows to the south, eventually reaching Red Creek. The alcove is approximately 20 m above the bottom of the drainage and at the base of a sandstone escarpment that is exposed along the upper edge of a shallow canyon created by the drainage. The terrain below the site slopes sharply to the drainage. The escarpment is composed of a crumbly porous sandstone with striations and inclusions. Sediments within the alcove are a residual sand primarily accumulated from granular disintegration and slab failure from the walls and sides of the alcove interior. A trowel test in the shelter was excavated to a depth of 70 cm with no indication of cultural deposits. A tan to light brown sand was observed in the trowel test. The site is in a juniper-dominated woodland. Gooseberry occurs directly in front of the alcove. The site has been impacted by bioturbation.

Two complete slab metates were recorded on the surface within the alcove and were the only artifacts observed at the site. Both metates exhibit central pecking on one surface with light to moderate smoothing.

The site probably represents a temporary shelter where some plant processing occurred. The cultural affiliation and age are unknown prehistoric, based on the absence of diagnostic artifacts.

Statement of Significance: The presence of only two artifacts and the apparent lack of subsurface deposits indicate that the site has limited research potential. Site documentation has exhausted its research potential.

Table III.25. Flaked-lithic Debitage, 5FN1578.

Material Type									Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone	
Size									
>1/2"		1	62	23		4	5		95 (63.3%)
1/4"-1/2"			17	24	2	6	1		50 (33.3%)
<1/4"				2		3			5 (3.4%)
Total (%)		1 (.7%)	79 (52.7%)	49 (32.7%)	2 (1.3%)	13 (8.6%)	6 (4%)		150 (100%)
Flake Type									
Shatter			7	15	1	2	2		27 (18%)
Simple			45	13					58 (38.7%)
Complex	1		27	21	1	11	4		65 (43.3%)
Bifacial Thinning									
Total (%)		1 (.7%)	79 (52.7%)	49 (32.7%)	2 (1.3%)	13 (8.6%)	6 (4%)		150 (100%)
Cortex									
Present	1		63	26	1	10	5		106 (70.7%)
Absent			16	23	1	3	1		44 (29.3%)
Total (%)	1 (.7%)		79 (52.7%)	49 (32.7%)	2 (1.3%)	13 (8.6%)	6 (4%)		150 (100%)
Flake Type (Sullivan and Rosen 1985)									
Complete	1		34	9	1	4	1		50 (33.3%)
Broken			27	15		3	3		48 (32%)
Flake Fragment			11	10		4			25 (16.7%)
Debris			7	15	1	2	2		27 (18%)
Total (%)	1 (.7%)		79 (52.7%)	49 (32.7%)	2 (1.3%)	13 (8.6%)	6 (4%)		150 (100%)

Table III.26. Flaked-lithic Debitage by Size Grade, 5FN1578.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	10 (43.5%)	6 (26.1%)	7 (30.4%)		23 (24%)
Orthoquartzite	5 (8.1%)	35 (56.4%)	22 (35.5%)		62 (64.6%)
Chalcedony					
Quartzite			1 (100%)		1 (1%)
Quartz	6 (100%)				6 (6.2%)
Silicified Wood			4 (100%)		4 (4.2%)
Other					
Total	21 (21.9%)	41 (42.7%)	34 (35.4%)		96 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	4 (16.7%)	7 (29.2%)	13 (54.2%)		24 (49%)
Orthoquartzite	2 (11.8%)	10 (58.8%)	5 (29.4%)		17 (34.7%)
Chalcedony	1 (50%)		1 (50%)		2 (4.1%)
Quartzite					
Quartz					
Silicified Wood	1 (16.7%)		5 (83.3%)		6 (12.2%)
Other	8 (16.3%)	17 (34.7%)	24 (49%)		49 (100%)
Total					
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	1 (50%)		1 (50%)		2 (100%)
Orthoquartzite					
Chalcedony					
Quartzite					
Quartz					
Silicified Wood					
Other					
Total	1 (50%)		1 (50%)		2 (100%)

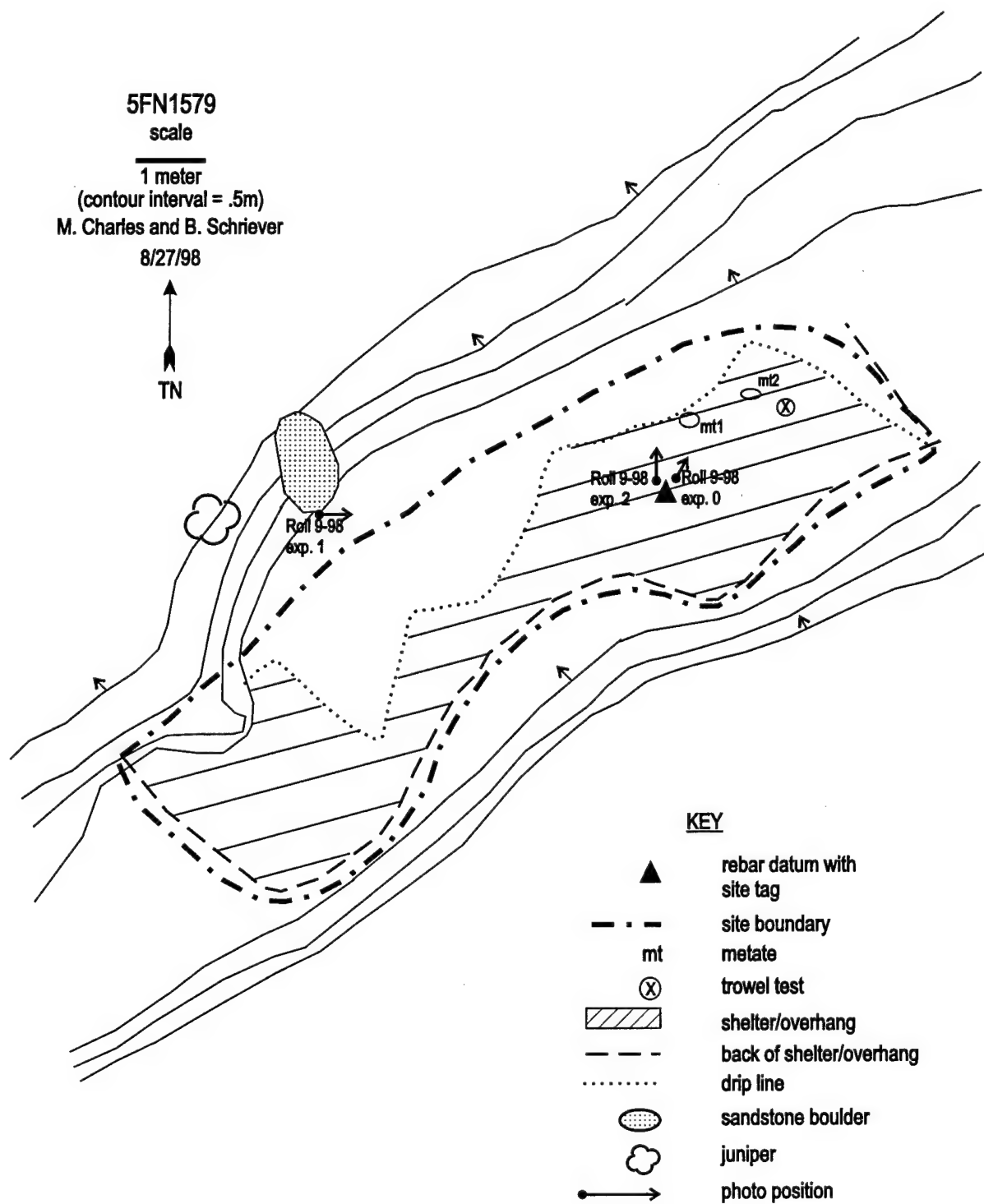


Figure III.27. Site Map, 5FN1579.

Management Recommendation: No further archeological work.

5FN1580

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5770 ft (1759m) asl

Aspect: Open Slope: 0-1°

Site Dimensions: 35 m E/W x 28 m N/S

This site consists of a sparse flaked-lithic artifact scatter located on the south edge of a flat grassy meadow 30 m north of a drainage and 50 m west of a smaller drainage, both of which are ephemeral tributaries of Salt Canyon (Figure III.28). A north to south running fence line is on the east edge of the site. The site is immediately north and adjacent to the tree line, at the southwestern edge of a gently sloping mesa top. The terrain slopes toward drainages within the woodland. Grasses and a few scattered juniper trees dominate the vegetation on the site. Other vegetation in the area includes prickly pear cactus, snakeweed, pinon, cholla, and sunflower. The sediments are relatively shallow (30 cm) and consist of a light brown, gravelly sandy loam. The site has minor amounts of military surface disturbance but is primarily in good condition. No cultural features were identified.

Artifacts observed at the site consist of eight flakes, which were analyzed in the field, and one chert projectile point, which was collected. The small number of artifacts (Table III.27) limits the discussion of activities that can be inferred about the site. The site represents a short term occupation possibly centered around hunting activities. The projectile point (Figure 7.2e) resembles Category P83 (Lintz and Anderson 1989 217-222), which suggests that the age of the site could range from the Early Ceramic to the Late Prehistoric periods (AD 750-AD 1650).

Statement of Significance: There is little potential for the site to yield significant intact buried deposits, based on the shallow soil deposition. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1581

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5825 ft (1775m) asl

Aspect: 190° Slope: 4°

Site Dimensions: 30 m N/S x 14 m E/W

The site is a light scatter of flaked-lithic artifacts. It is in an open meadow with sparse pinon and juniper woodland to the east and west (Figure III.29). It is located on a gently sloping mesa top just north of a two-track road. The vegetation at the site consists primarily of prickly pear cactus, short prairie grasses, and sunflowers. Sediments are a light brown silt loam, approximately 50 cm in depth. The site has suffered some minor disturbance from bioturbation and military maneuvers; otherwise, it is in good condition.

A total of 14 flakes was analyzed in the field (Table III.28). Artifacts are visible primarily in open areas among low level vegetation, and in deflated areas. No temporally diagnostic materials, tools or features were located. The small number of artifacts limits the inferences that can be drawn from the assemblage. The absence of cortex on any of the artifacts and the presence of a bifacial-thinning flake, suggests that latter stages of reduction and tool production probably occurred at the site. Locally available lithic raw materials were utilized. The cultural affiliation and period are unknown because the site lacks temporally diagnostic artifacts.

Statement of Significance: There is little potential for the site to yield significant subsurface deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

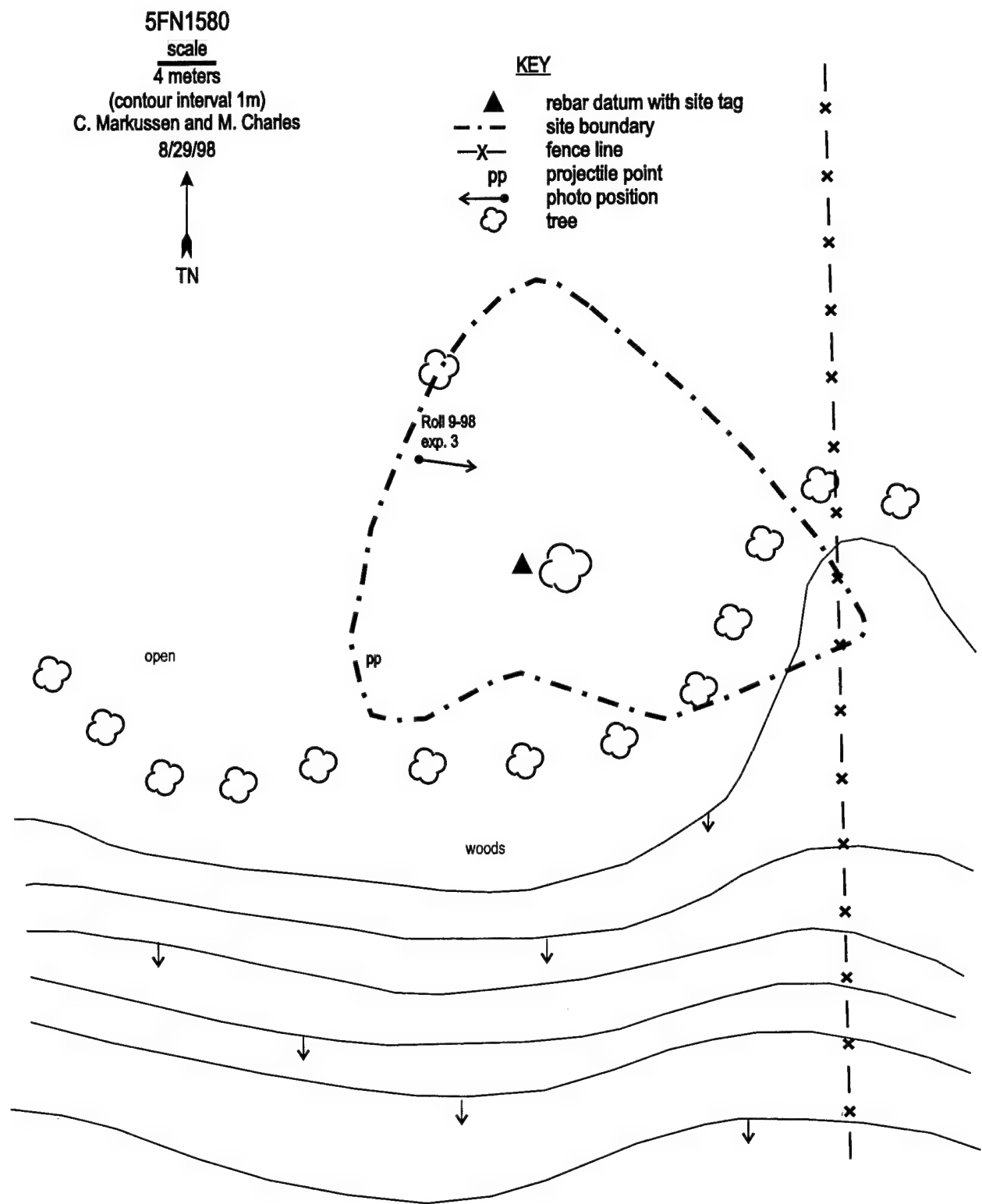


Figure III.28. Site Map, 5FN1580.

Table III.27. Flaked-lithic Debitage, 5FN1580.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1		5		1				7 (87.5%)
1/4"-1/2"				1						1 (12.5%)
<1/4"										
Total (%)		1 (12.5%)		6 (75%)		1 (12.5%)				8 (100%)
Flake Type										
Shatter				2						2 (25%)
Simple		1		3		1				5 (62.5%)
Complex				1						1 (12.5%)
Bifacial Thinning										
Total (%)		1 (12.5%)		6 (75%)		1 (12.5%)				8 (100%)
Cortex										
Present		1		1						2 (25%)
Absent				5		1				6 (75%)
Total (%)		1 (12.5%)		6 (75%)		1 (12.5%)				8 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1		1						2 (25%)
Broken				2						2 (25%)
Flake Fragment				1		1				2 (25%)
Debris				2						2 (25%)
Total (%)		1 (12.5%)		6 (75%)		1 (12.5%)				8 (100%)

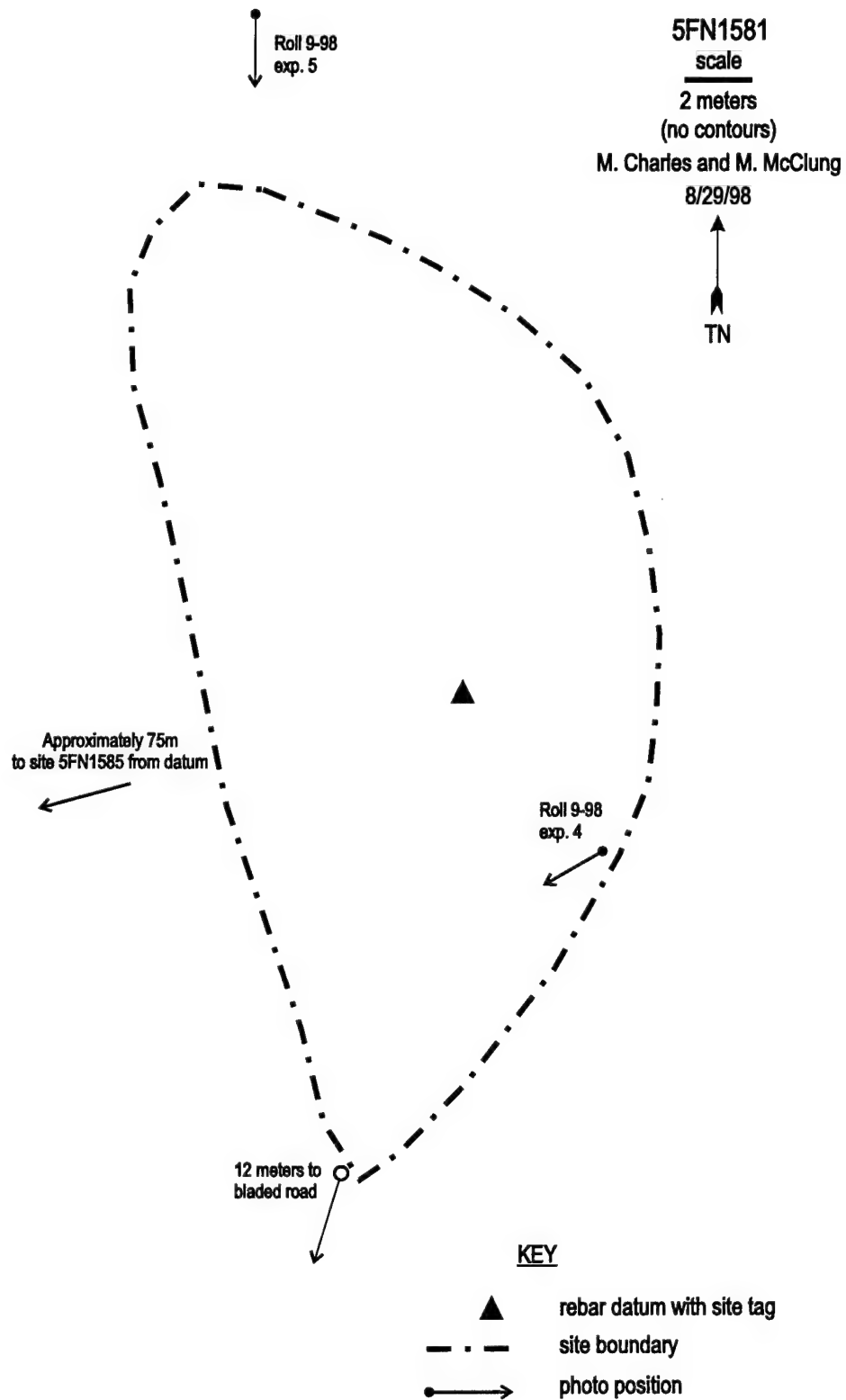


Figure III.29. Site Map, 5FN1581

Table III.28. Flaked-lithic Debitage, 5FN1581.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1		10						11 (78.6%)
1/4"-1/2"		1		2						3 (21.4%)
<1/4"										
Total (%)		2 (14.3%)		12 (85.7%)						14 (100%)
Flake Type										
Shatter		1		4						5 (35.7%)
Simple		1		3						4 (28.6%)
Complex				4						4 (28.6%)
Bifacial Thinning				1						1 (7.1%)
Total (%)		2 (14.3%)		12 (85.7%)						14 (100%)
Cortex										
Present										
Absent		2		12						14 (100%)
Total (%)		2 (14.3%)		12 (85.7%)						14 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete				1						1 (7.1%)
Broken				2						2 (14.3%)
Flake Fragment		1		5						6 (42.9%)
Debris		1		4						5 (35.7%)
Total (%)		2 (14.3%)		12 (85.7%)						14 (100%)

5FN1582

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5990 ft (1827 m) asl

Aspect: 140° Slope: 5°

Site Dimensions: 60 m N/S x 20 m E/W

The site consists of a flaked-lithic artifact scatter, which is located along an open grassy bench on the east side of a ridge that forms the divide between a large tributary of Red Creek and Salt Canyon (Figure III.30). The bench is above the tributary canyon and is on the northeast corner of a saddle along the ridge. The sediments are a brown silty sand that are at least 30 cm deep. Sediments are more shallow on the west side of the site nearer the rocky crest of the ridge. The bench slopes gradually to the east. The crest slopes down to the south where the saddle begins. Juniper, pinon, various grasses, cholla, skunkbush, prickly pear cactus, and mountain mahogany dominate the local vegetation. Minor erosion is present, but the site is in good condition.

The assemblage includes twenty-five flakes, one orthoquartzite chopper (Figure 7.1e), one chert projectile point, one orthoquartzite biface, one chert biface, one chert biface fragment, one retouched orthoquartzite flake, and one beveled chert scraper (Figure 7.1d). All tools were collected. Two cores were also recorded. One is a multidirectional chalcedony core, and the other is a bidirectional orthoquartzite core. Flakes were manufactured from orthoquartzite, chalcedony, and chert. The presence of partially buried larger artifacts at 10 cm, indicates that the site has the potential for subsurface deposits. The artifact assemblage indicates that activities that probably occurred at the site included plant or animal processing, lithic-core reduction, and hunting. A small, contracting stem projectile point resembles a Category P75 documented in Lintz and Anderson (1989: 208-210), which suggests an Early to Middle Ceramic periods date (A.D. 800-1450).

Statement of Significance: This site has the potential for further research information under the themes of chronology and cultural relationships, settlement patterns, and prehistoric economies as defined by Zier et al. 1997 (CRMP). The site has a variety of artifacts and the potential for at least shallow subsurface deposits, based on the presence of partially buried artifacts.

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggests a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified.

5FN1583

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5990 ft (1826 m) asl

Aspect: 190° Slope: 3°

Site Dimensions: 7.5 m E/W x 4 m N/S

The site consists of a sparse flaked-lithic artifact scatter along the edge of a grassy bench overlooking a tributary canyon of Red Creek to the west (Figure III.31). The bench is relatively flat with sandstone boulders along the west edge of the bench where the slope increases dramatically. The surface of the bench is covered with small tabular pieces of sandstone. Sediments are shallow (20 cm) and they consist of a brown silty sand. The site has suffered minor erosion, but the surface is stable. Vegetation on the site consists of various grasses, juniper, pinon, mountain mahogany, cholla, and prickly pear cactus.

One hafted-chert biface fragment (collected) and four flakes (Table III.29) constitute the surface artifact assemblage. Locally available lithic raw materials were utilized. The small number of artifacts limits the inferences that can be drawn from the assemblage. This site may be related to another nearby site, 5FN1584, which is 30 m to the south. Temporally diagnostic artifacts were not recovered, and the cultural affiliation and period of use remain undetermined.

Statement of Significance: The site has little potential to yield further information, based on the small number of observed

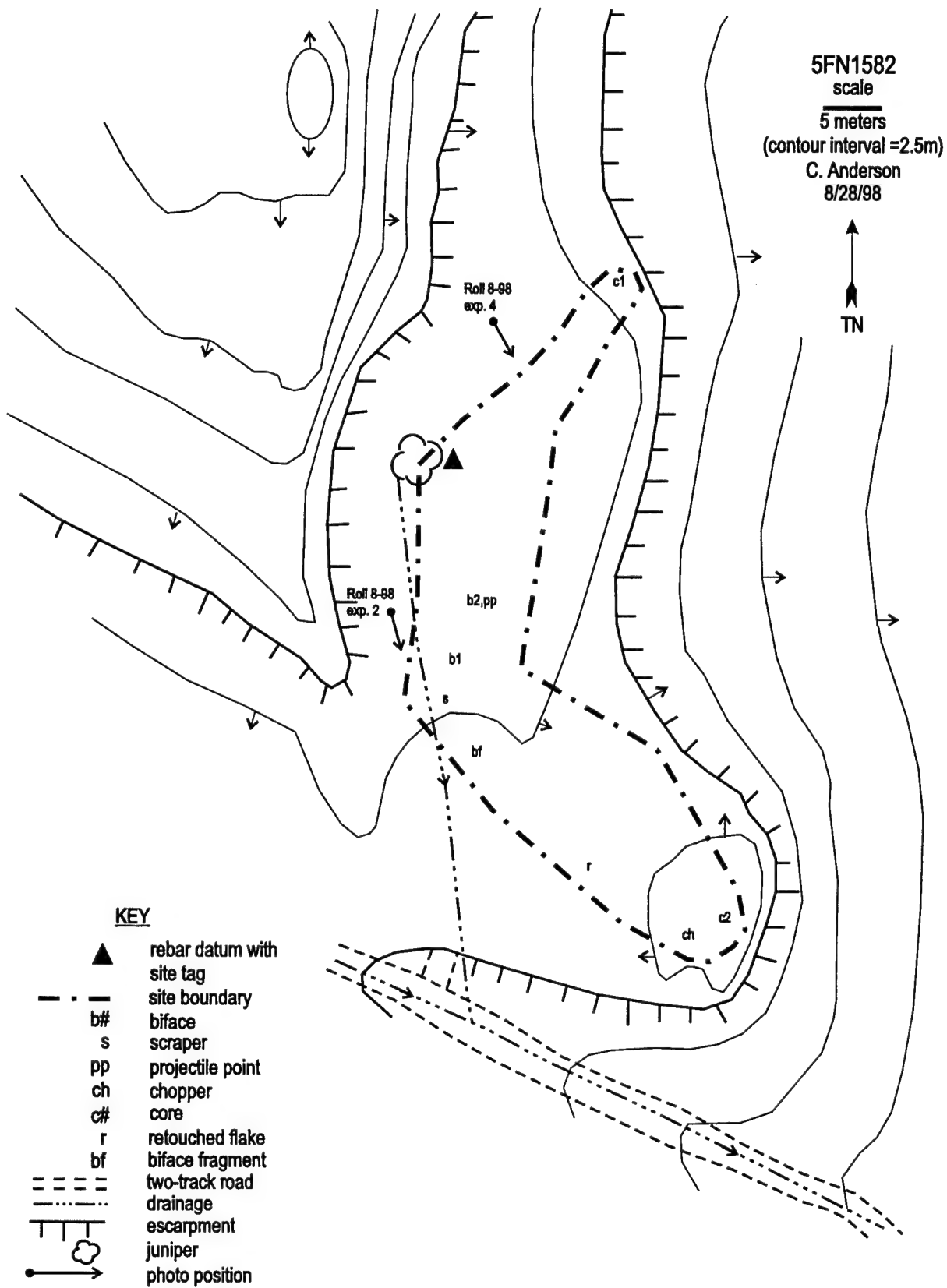


Figure III.30. Site Map, 5FN1582.

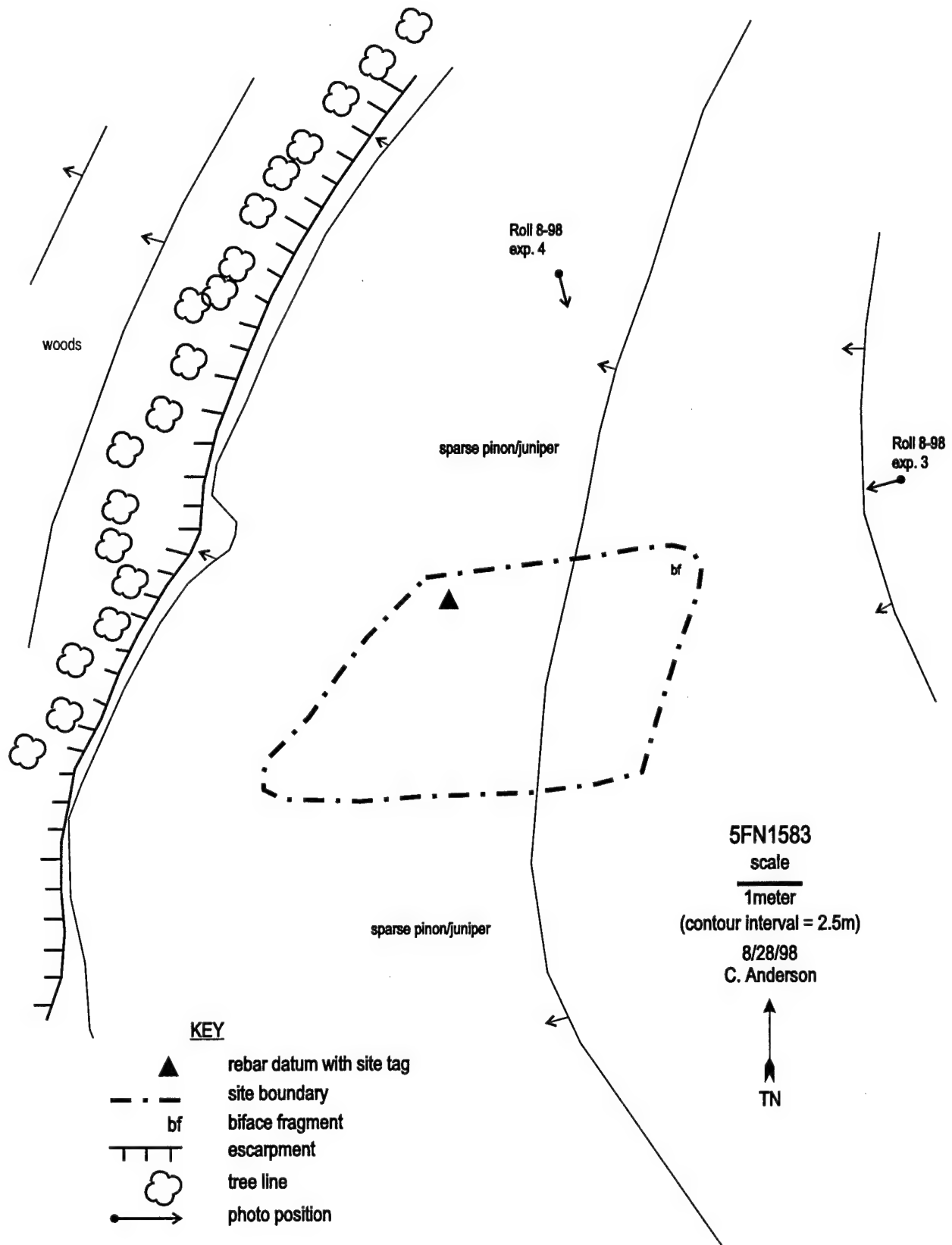


Figure III.31. Site Map, 5FN1583.

Table III.29. Flaked-lithic Debitage, 5FN1583.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	1	2						4 (100%)
1/4"-1/2"										
<1/4"										
Total (%)		1 (25%)	1 (25%)	2 (50%)						4 (100%)
Flake Type										
Shatter		1		1						2 (50%)
Simple				1						1 (25%)
Complex			1							1 (25%)
Bifacial Thinning										
Total (%)		1 (25%)	1 (25%)	2 (50%)						4 (100%)
Cortex										
Present			1							1 (25%)
Absent		1		2						3 (75%)
Total (%)		1 (25%)	1 (25%)	2 (50%)						4 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete										
Broken										
Flake Fragment			1	1						2 (50%)
Debris		1		1						2 (50%)
Total (%)		1 (25%)	1 (25%)	2 (50%)						4 (100%)

artifacts and the low potential for buried materials. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1584

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5990 ft (1826 m) asl

Aspect: 140° Slope: 5°

Site Dimensions: 28 m E/W x 36 m N/S

The site is located near the south end of a bench that overlooks a tributary canyon of Red Creek to the west and the south (Figure III.32). Sandstone boulders outcrop along the west and south edges of the bench, and boulders are found on the interior of the bench within the site boundary. The area has open grassy areas, but also has enough trees to obscure the line of sight across the site from the east to the west. Vegetation includes mountain mahogany, juniper, pinon, cholla, various grasses, skunkbush, and prickly pear cactus. Sediments are a gravelly silt, that are less than 20 cm in depth. The site has suffered minor erosion, but is in good condition.

A total of thirty-two artifacts is recorded at the site: one chert core fragment, two chert biface tips, one chert drill fragment, and twenty-eight flakes. The drill and the biface fragment were collected. The flakes were analyzed in the field (Table III.30). The assemblage suggests that both tool manufacturing and core reduction took place at the site, but that earlier stages of core reduction are more prevalent (overall size and type of flakes). Interpretation of the assemblage following Sullivan and Rosen (1985), suggests more of an emphasis on tool manufacturing activities, although cortex is present on nearly half of the artifacts. Locally available lithic raw materials were utilized, with chert dominating. The site represents a temporary prehistoric occupation of unknown age and cultural affiliation.

Statement of Significance: The site has limited research potential based on the number of artifacts and the low potential for buried cultural remains. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1585

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5840 ft (1780 m)

Aspect: 176 Slope: 0°

Site Dimensions: 20 m NW/SE x 8 m NE/SW

The site is a sparse flaked-lithic artifact scatter, located along the west side of a broad mesa top overlooking Salt Canyon to the southwest (Figure III.33). Vehicles traveling Colorado State Highway 115 are visible to the west. A bladed dirt road is located 14 m south of the site and another bladed road is 18 m to the north. The two roads intersect approximately 50 m west of the site. A 5 m x 5 m circle of stone is located on the east side of the site next to an old woodpile. The circle was probably recently constructed. The sediments are a gravelly silt that is very shallow (10-15 cm). Various grasses are the dominant vegetation with a few juniper and sunflowers. The surface is relatively undisturbed.

A total of fifteen flakes is recorded from the site (Table III.31). No formal tools or features are present. Except for one chert flake, the assemblage consists entirely of local orthoquartzite. The assemblage is small, but the artifacts may suggest that tool manufacturing was the primary activity. This assumption is based on the variety of flake types and the number of smaller flakes. The site is a prehistoric site of unknown age and cultural affiliation.

Statement of Significance: The site lacks the potential for further research based on the small number of artifacts and the shallow soil deposition. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

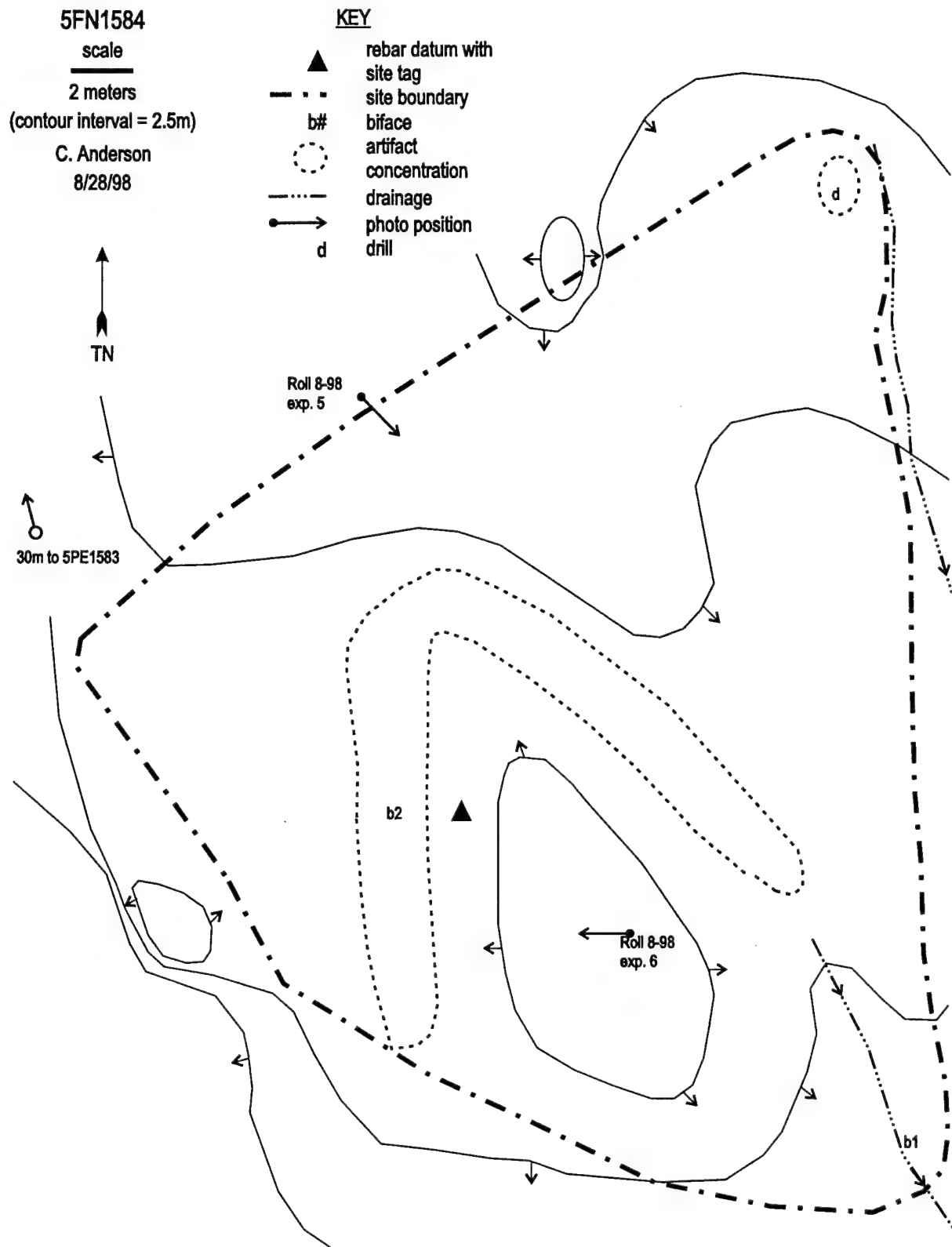


Figure III.32. Site Map, 5FN1584.

Table III.30. Flaked-lithic Debitage, 5FN1584.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	1	12	6					20 (71.4%)
1/4"-1/2"			2	5						7 (25%)
<1/4"				1						1 (3.6%)
Total (%)		1 (3.6%)	3 (10.7%)	18 (64.3%)	6 (21.4%)					28 (100%)
Flake Type										
Shatter		1		4	1					6 (21.4%)
Simple			2	9	1					12 (42.9%)
Complex			1	5	3					9 (32.1%)
Bifacial Thinning					1					1 (3.6%)
Total (%)		1 (3.6%)	3 (10.7%)	18 (64.3%)	6 (21.4%)					28 (100%)
Cortex										
Present		1	2	10						13 (46.4%)
Absent			1	8	6					15 (53.6%)
Total (%)		1 (3.6%)	3 (10.7%)	18 (64.3%)	6 (21.4%)					28 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete				2	1					3 (10.7%)
Broken			1	8	3					12 (42.9%)
Flake Fragment			2	4	1					7 (25%)
Debris		1		4	1					6 (21.4%)
Total (%)		1 (3.6%)	3 (10.7%)	18 (64.3%)	6 (21.4%)					28 (100%)

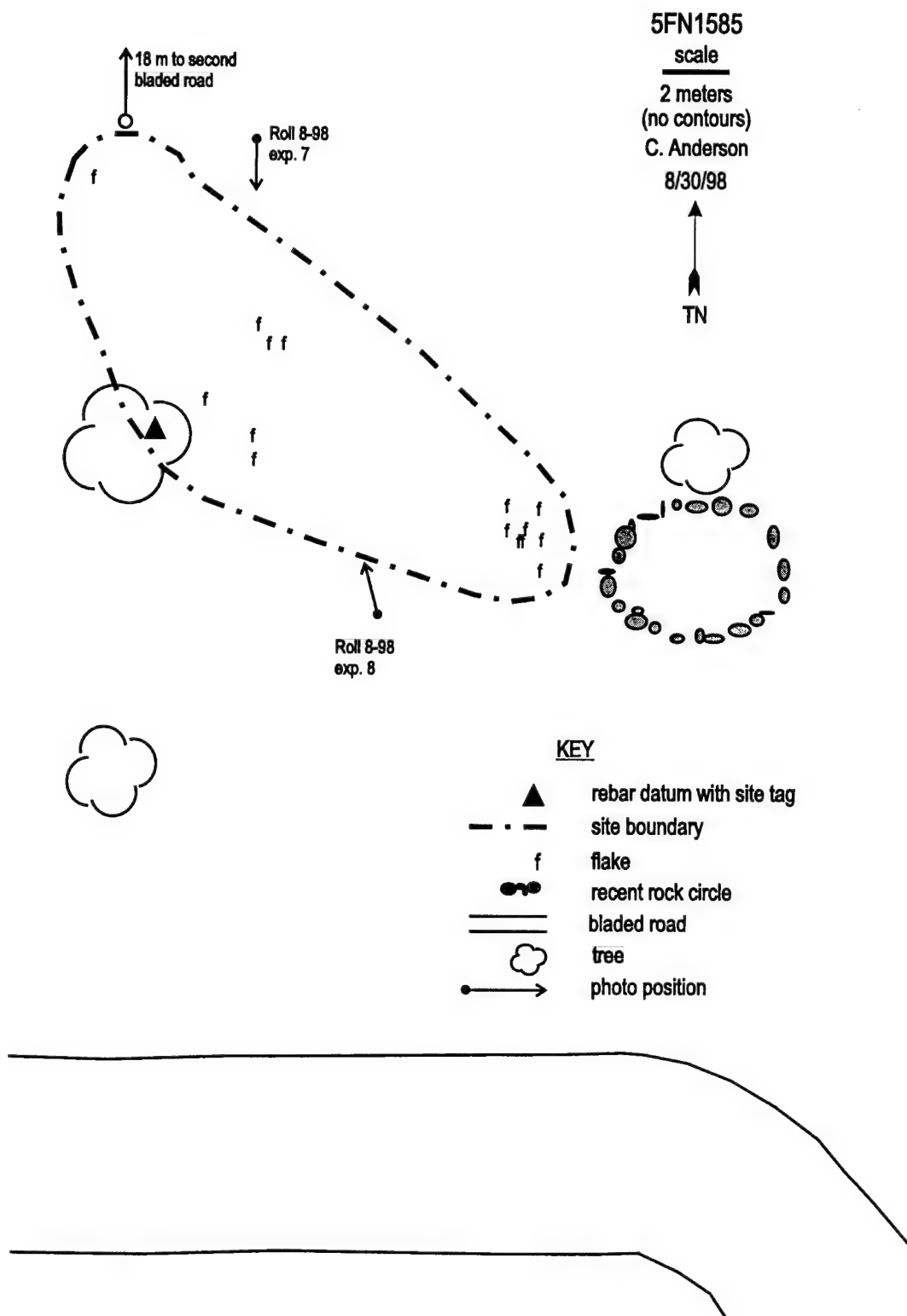


Figure III.33. Site Map 5FN1585.

Table III.31. Flaked-lithic Debitage, 5FN1585.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			8							8 (53.3%)
1/4"-1/2"			6	1						7 (46.7%)
<1/4"										
Total (%)			14 (93.3%)	1 (6.7%)						15 (100%)
Flake Type										
Shatter			1							1 (6.6%)
Simple			6	1						7 (46.7%)
Complex			7							7 (46.7%)
Bifacial Thinning										
Total (%)			14 (93.3%)	1 (6.7%)						15 (100%)
Cortex										
Present			6							6 (40%)
Absent			8	1						9 (60%)
Total (%)			14 (93.3%)	1 (6.7%)						15 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			4							4 (26.7%)
Broken			4	1						5 (33.3%)
Flake Fragment			5							5 (33.3%)
Debris			1							1 (6.6%)
Total (%)			14 (93.3%)	1 (6.7%)						15 (100%)

5FN1586

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5980 ft (1823 m) asl

Aspect: 120° Slope: 3°

Site Dimensions: 29 m NW/SE x 9.5 m NE/SW

The site is a sparse flaked-lithic artifact scatter located along the treeline on the west side of an open grassy area with a gentle eastward slope (Figure III.34). It is located in the center of a broad southerly extending mesa that separates two intermittent tributaries of Red Creek. The sediments are a brown gravelly silt that is quite shallow (10 cm). A north/south two-track road is 40 m east of the site. The vegetation on the site is dominated by various grasses, prickly pear cactus, snakeweed, cholla, juniper, and sunflower. The site is in good condition with only minor disturbances.

A total of sixteen artifacts is recorded from the site. Fourteen flakes were field analyzed (Table III.32), and the two retouched orthoquartzite flakes were collected. All artifacts are of locally available orthoquartzite. The small number of artifacts limits the inferences drawn from the flake assemblage, but core reduction would have been the primary activity at the site. Justification for this conclusion includes the overall size of the flakes, the number of flakes with cortex, and the frequencies of flake types. The site probably represents a single episode of lithic reduction. The site is of unknown age and cultural affiliation.

Statement of Significance: This site lacks the potential for further information based on the paucity of artifacts and the absence of significant soil deposition. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1587

Site Type: Historic Transportation Network Site

Elevation: 5690-5760 ft (1737-1741 m)

Aspect: 225° Slope: 0-5°

Site Dimensions: 425' long x 6.5' wide

This site is a short segment of a historic road (Figure III.35) that follows the bottom of a side canyon on the east side of Salt Canyon. The road probably continued southwest to Salt Canyon, although it could not be followed in that direction. The road follows along a small unnamed drainage in the side canyon. At the north end, the road forks, one branch continues north up the slope a short distance before it could not be followed due to numerous open areas. The other branch goes to the northeast and ends in the drainage at an east to west fence line. It probably continued up the drainage, but could not be followed. Small segments of stacked rock were found along the road in several places (Figure III.36). A few axe-cut limbs were also noted on trees along the road. The road width varies from 5 to 6.5 feet across as it meanders from the base of the drainage to low benches above the drainage. One ten-foot tall pinon has grown in the road on the northeastern fork. The sediments are shallow (10 cm) and consist of a gravelly sandy silt. Exposed sandstone bedrock is common in the area. The site is in a woodland. Vegetation includes juniper, pinon, bunchgrass, cholla, and prickly pear cactus. The site has been affected by minor water erosion.

No artifacts were found directly associated with the road. The surrounding land was patented in 1913 and 1923 (Zier et al. 1987 Appendix D).

Statement of Significance: The site is a short segment of a historic road of unknown age. No artifacts were found associated with the road. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

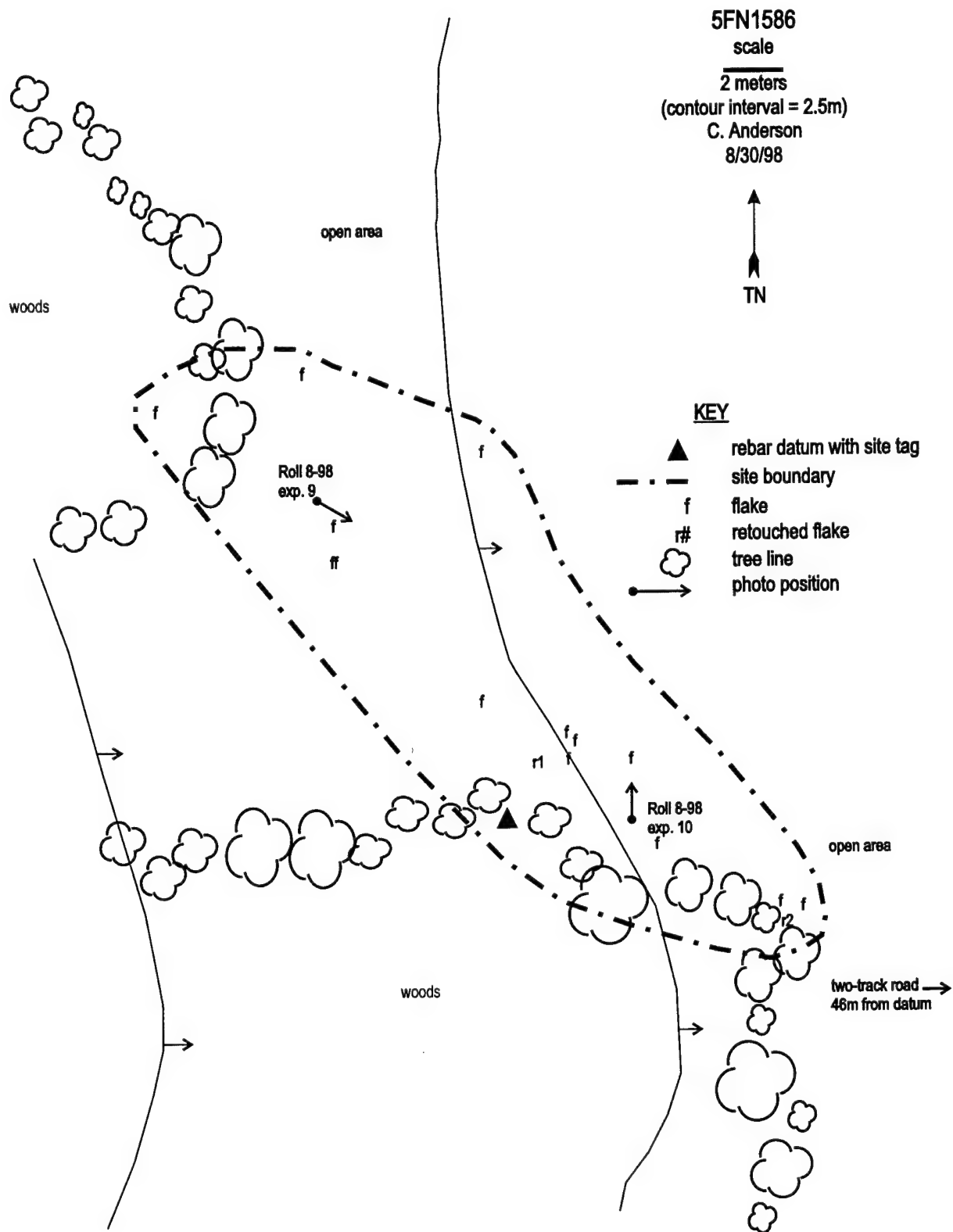
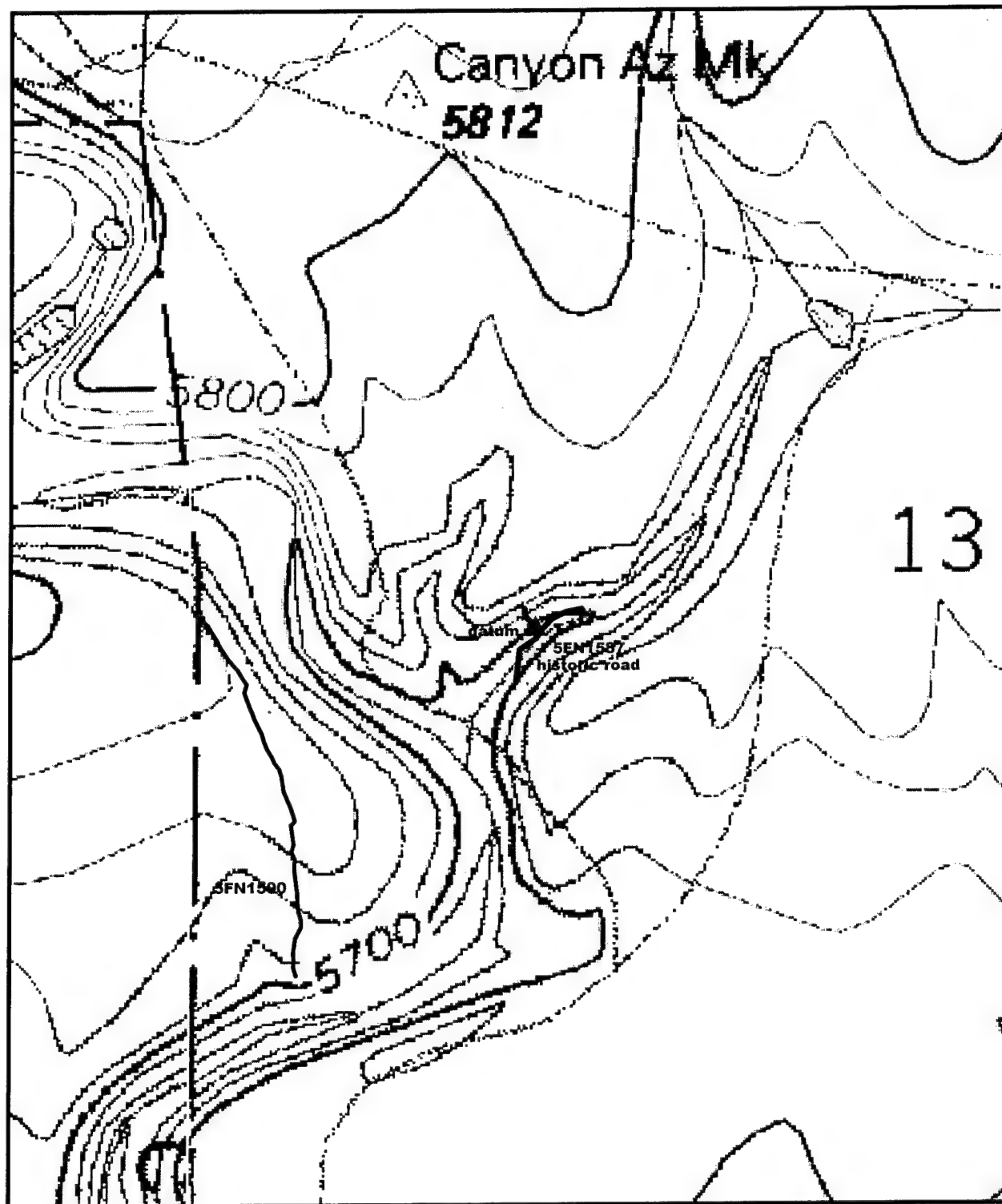



Figure III.34. Site Map, 5FN1586.

Table III.32. Flaked-lithic Debitage, 5FN1586.

Material Type								Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone
Size								
>1/2"			12					12 (85.7%)
1/4"-1/2"			2					2 (14.3%)
<1/4"								
Total (%)			14 (100%)					14 (100%)
Flake Type								
Shatter			6					6 (42.9%)
Simple			6					6 (42.9%)
Complex			2					2 (14.3%)
Bifacial Thinning								
Total (%)			14 (100%)					14 (100%)
Cortex								
Present			11					11 (78.6%)
Absent			3					3 (21.4%)
Total (%)			14 (100%)					14 (100%)
Flake Type (Sullivan and Rosen 1985)								
Complete			2					2 (14.3%)
Broken			5					5 (35.7%)
Flake Fragment			1					1 (7.1%)
Debris			6					6 (42.9%)
Total (%)			14 (100%)					14 (100%)



50 0 50 100 Meters



5FN1587

Pierce Gulch 7.5' Quadrangle

Figure III.35. Site Map, 5FN1587.



Figure III.36. Photograph of historic road, 5FN1587. Note stacked rocks along side of road. View is to the northeast. Roll 9, #17.

5FN1588

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6015 ft (1833 m) asl

Aspect: 150° Slope: 0-3°

Site Dimensions: 110 m N/S x 30 m E/W

The site is a large flaked-lithic artifact scatter, which includes several flaked lithic tools. The site is located on a narrow north/south bench approximately 20 m east and below a ridge top (Figure III.37). The ridge is part of the uplands above and east of Salt Canyon. A large unnamed intermittent drainage is 80 m east of the site. The bench is relatively flat with a gentle eastward slope. Sediments consist of a light brown sandy loam with gravel, and their depth exceeds 30 cm. Pinon, juniper, prairie grasses, cholla, serviceberry, and prickly pear cactus dominate the vegetation on the site. The artifacts are concentrated in areas of slope wash where vegetation does not obscure ground visibility.

A total of 121 flaked lithic artifacts including one quartzite core, one hornfels/basalt core, one orthoquartzite core chopper, one chert biface tip, one large unfinished chert biface, one crude chert projectile point, and 115 flakes was noted. The projectile point and the two bifaces were collected. Groundstone is not present. All observed flakes were analyzed in the field (Table III.33). Material types include chalcedony, chert, orthoquartzite, quartzite, quartz, and silicified wood. Orthoquartzite and chert are the most prevalent raw material types, accounting for ninety percent of all flakes. Some of the raw materials are eroding from the local gravel, but others must have been transported to the site. Activities inferred from the assemblage include hunting, core reduction, and tool manufacturing. Both debitage classification systems used to interpret the flake assemblage indicate that core reduction and tool production occurred, but they differ in regard to which is the more common activity. Using Ahler and Smail (1999), the high number of large flakes, the relatively high number of simple flakes, and the high percentage of flakes with cortex suggest that core reduction was the more common activity at the site. The high number of complex flakes, however, may indicate that early and middle stages of reduction are present. In addition, the flake assemblage was separated by size grade to examine the variables of material type and flake type (Table III.34).

5FN1588
 scale
 4 meters
 (contour interval = 1m)
 8/30/98
 J. Hall and M. Charles



- KEY**
- ▲ rebar datum with site tag
 - △ mapping datum
 - . - site boundary
 - artifact concentration
 - b# biface
 - pp projectile point
 - - - drainage
 - ☁ pinon/juniper
 - photo position
 - === military gravel road

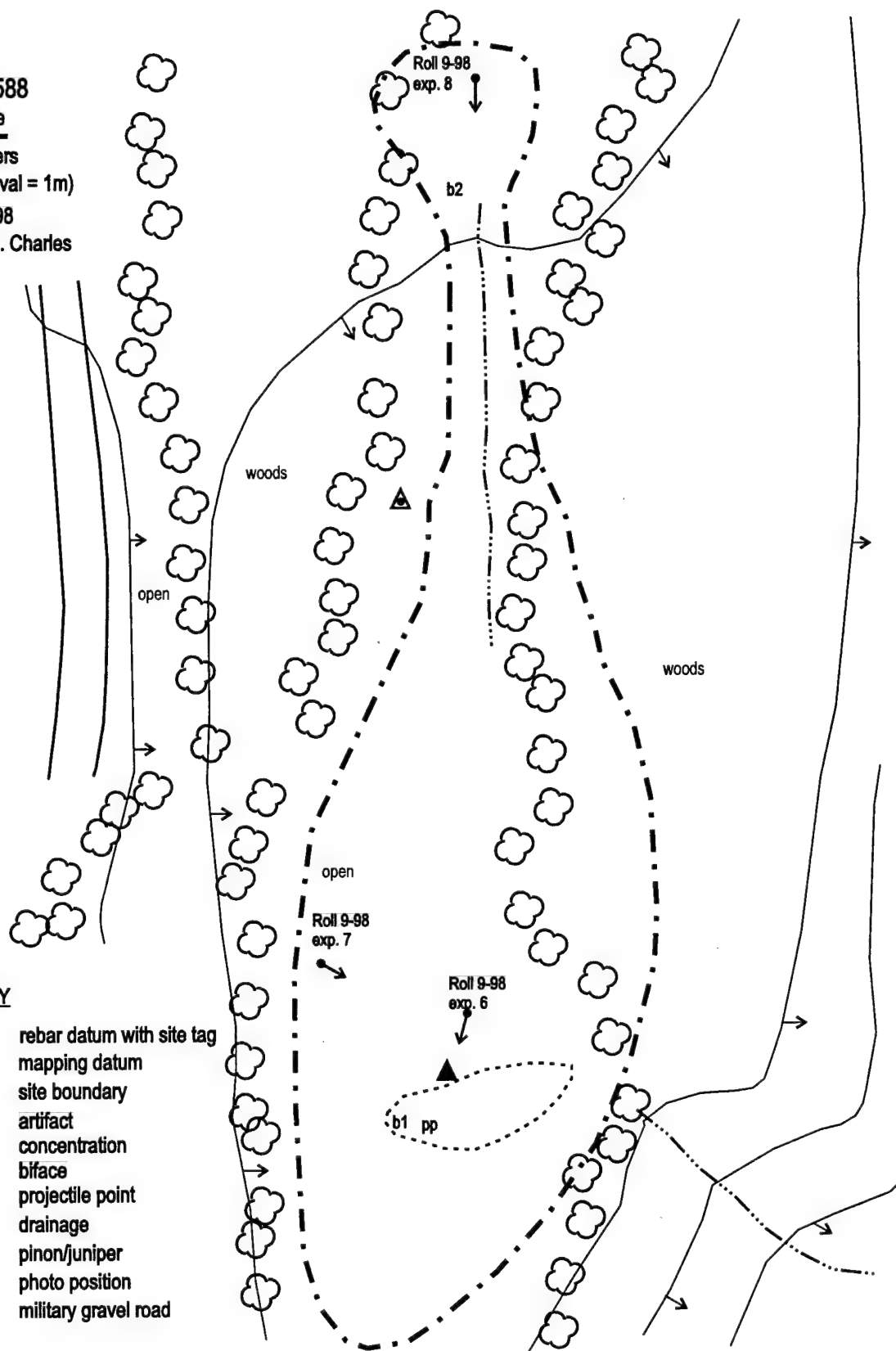


Figure III.37. Site Map, 5FN1588.

Table III.33. Flaked-lithic Debitage, 5FN1588.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	54	25	3		2			85 (73.9%)
1/4"-1/2"		1	4	18		3	1			27 (23.5%)
<1/4"				3						3 (2.6%)
Total (%)		2 (1.7%)	58 (50.5%)	46 (40%)	3 (2.6%)	3 (2.6%)	3 (2.6%)			115 (100%)
Flake Type										
Shatter			6	11						17 (14.8%)
Simple			23	9	1	1	3			37 (32.2%)
Complex		2	29	26	2	2				61 (53%)
Bifacial Thinning										
Total (%)		2 (1.7%)	58 (50.5%)	46 (40%)	3 (2.6%)	3 (2.6%)	3 (2.6%)			115 (100%)
Cortex										
Present		2	53	29	2	2	2			90 (78.3%)
Absent			5	17	1	1	1			25 (21.7%)
Total (%)		2 (1.7%)	58 (50.5%)	46 (40%)	3 (2.6%)	3 (2.6%)	3 (2.6%)			115 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1	28	12	2	1	1			45 (39.1%)
Broken			19	13		1	1			34 (29.5%)
Flake Fragment		1	5	10	1	1	1			19 (16.5%)
Debris			6	11						17 (14.9%)
Total (%)		2 (1.7%)	58 (50.5%)	46 (40%)	3 (2.6%)	3 (2.6%)	3 (2.6%)			115 (100%)

Table III.34. Flaked-lithic Debitage by Size Grade, 5FN1588.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	9 (36%)	5 (20%)	11 (44%)		25 (29.4%)
Orthoquartzite	6 (11.1%)	22 (40.7%)	26 (48.2%)		54 (63.5%)
Chalcedony		1 (33.3%)	2 (66.7%)		3 (3.5%)
Quartzite			1 (100%)		1 (1.2%)
Quartz		2 (100%)			2 (2.4%)
Silicified Wood					
Other					
Total	15 (17.7%)	30 (35.5%)	40 (47.1%)		85 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	2 (11.1%)	1 (5.6%)	15 (83.3%)		18 (66.7%)
Orthoquartzite		1 (25%)	3 (75%)		4 (14.8%)
Chalcedony					
Quartzite			1 (100%)		1 (3.7%)
Quartz		1 (100%)			1 (3.7%)
Silicified Wood		1 (33.3%)	2 (66.7%)		3 (11.1%)
Other					
Total	2 (7.4%)	4 (14.8%)	21 (77.8%)		27 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert		3 (100%)			3 (100%)
Orthoquartzite					
Chalcedony					
Quartzite					
Quartz					
Silicified Wood					
Other					
Total		3 (100%)			3 (100%)

Complex flakes are more prevalent in Size Grade 1 and are even higher in Size Grade 2. The very high percentage of Size Grade 2 complex chert flakes (83%) could indicate that chert was used more for tool production, while orthoquartzite flakes represent a wider range of reduction. Using the Sullivan and Rosen (1985) classification system, the data suggests that tool manufacturing and core reduction were equally important at the site based on the percentages of the flake types. Broken flakes and flake fragments are interpreted to be the result of tool manufacturing. Complete flakes and debris are interpreted to result from core reduction. The higher number of complete flakes would indicate that initial stages of core reduction were more prevalent than intensive core reduction. The projectile point resembles those of Category P42 (Lintz and Anderson 1989:160), suggesting that the site dates to the Early to Middle Ceramic periods (AD 600-1600).

Statement of Significance: The site is recommended as eligible for nomination to the NRHP. Artifacts have been exposed through slope wash, although much of the site area is undisturbed. The site, therefore, has the potential to yield significant intact subsurface deposits that could provide important information on the research themes of chronology and cultural relationships, settlement patterns, and prehistoric economies as outlined in the CRMP (Zier et al. 1997).

Management Recommendation: Avoid and Test. The site is subject to erosion from slope wash. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggests a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified.

5FN1589

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6020 ft (1835 m) asl

Aspect: 110° Slope: 2-6°

Site Dimensions: 74 m NE/SW x 40 SE/NW

The site is a sparse flaked-lithic and groundstone scatter with artifacts mostly exposed in areas of slope wash. The site is located on a saddle on a north/south-trending ridge with a large cliff face up slope to the north (Figure III.38). Large intermittent drainages are located on the east and the west side of the saddle. The artifacts are scattered over open flat areas that have less vegetation than surrounding slopes. Vegetation includes various grasses, pinon, juniper, cholla, prickly pear cactus, and serviceberry. Bedrock is exposed in a few areas and sediment depth is shallow (10 cm) over most of the site. The sediments are a gravelly, light brown sandy loam. There is definite disturbance to the site from slope wash erosion and old two-tracks (tank trails).

Thirty-three artifacts are recorded at the site. They include one sandstone mano, two sandstone metate fragments, one chert projectile point fragment (collected), and twenty-nine flakes (Table III.35). Over eighty percent of the flakes was either orthoquartzite or chert. The flake assemblage although relatively small, does indicate a range of reduction activities. The number of complex flakes could be indicative of middle to later stages of reduction, but the high percentage of large flakes and flakes with cortex suggest early stages of reduction activities. Interpretation of the assemblage using the Sullivan and Rosen (1985) system, suggests more of an emphasis on core reduction activities as opposed to tool manufacturing activities. The presence of two metate fragments and a mano indicate that food processing activities also occurred at the site. The projectile point fragment is not diagnostic. Therefore, the site's cultural affiliation and period of use remain unknown.

Statement of Significance: There is little potential for significant subsurface deposits because sediments are so shallow. The site is largely restricted to a surface or near-surface context. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1590

Site Type: Historic Homesteading/Agriculture-Related Non-Habitation Site

Elevation: 5650-5780 ft (1722-1761 m) asl

Aspect: 150° Slope: 1-15°

Site Dimensions: 1575' long X 6.5' wide

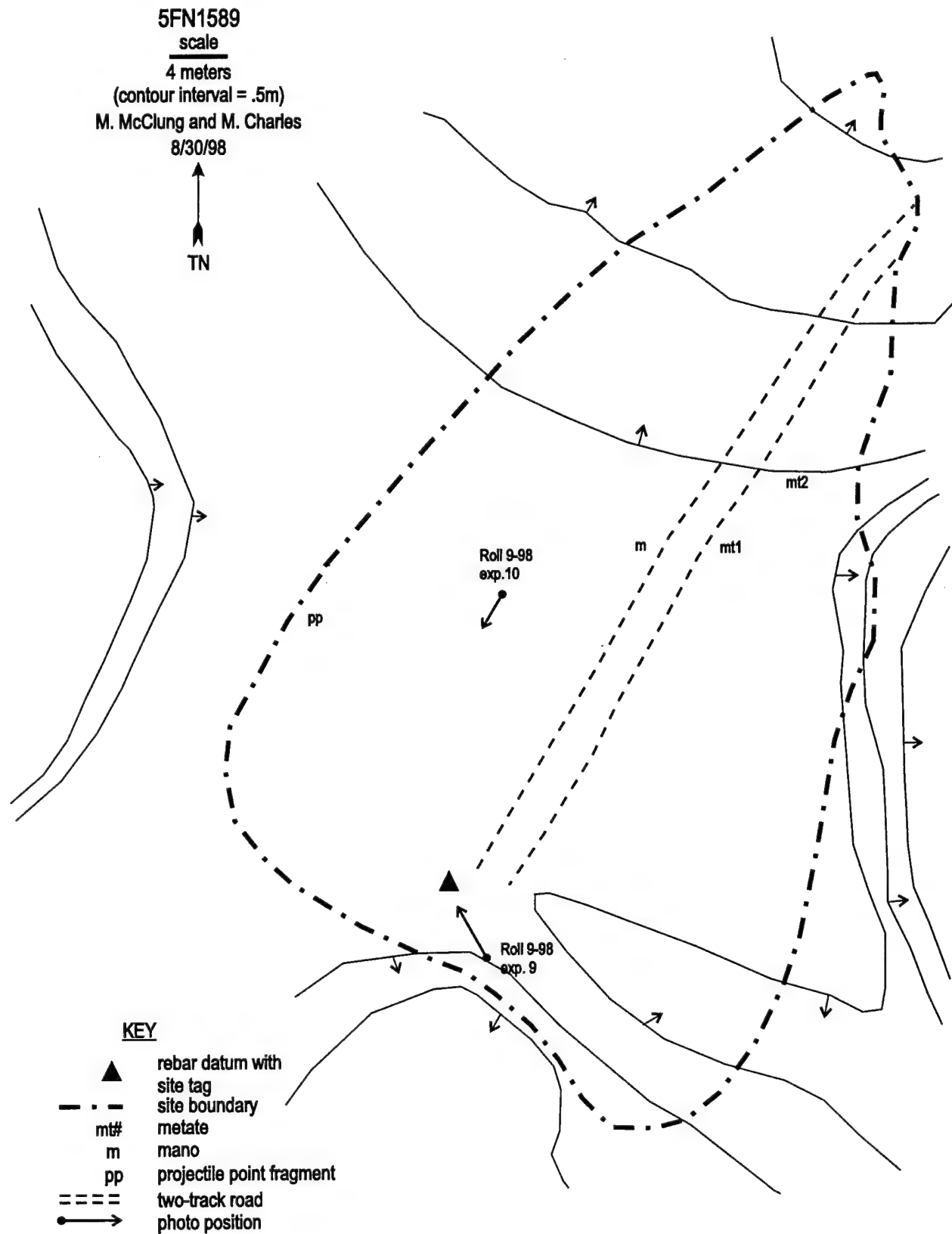


Figure III.38. Site Map, 5FN1589.

Table III.35. Flaked-lithic Debitage, 5FN1589.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	12	8		2				23 (79.3%)
1/4"-1/2"		1	2	1	1					5 (17.2%)
<1/4"				1						1 (3.5%)
Total (%)		2 (6.9%)	14 (48.3%)	10 (34.5%)	1 (3.4%)	2 (6.9%)				29 (100%)
Flake Type										
Shatter				2						2 (6.9%)
Simple		2	4	2		1				9 (31%)
Complex			10	6	1	1				18 (62.1%)
Bifacial Thinning										
Total (%)		2 (6.9%)	14 (48.3%)	10 (34.5%)	1 (3.4%)	2 (6.9%)				29 (100%)
Cortex										
Present		2	9	7		2				20 (69%)
Absent			5	3	1					9 (31%)
Total (%)		2 (6.9%)	14 (48.3%)	10 (34.5%)	1 (3.4%)	2 (6.9%)				29 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1	10	4		2				17 (58.6%)
Broken		1	3	3						7 (24.1%)
Flake Fragment			1	1	1					3 (10.3%)
Debris				2						2 (6.9%)
Total (%)		2 (6.9%)	14 (48.3%)	10 (34.5%)	1 (3.4%)	2 (6.9%)				29 (100%)

The site consists of two segments of a juniper and barbed wire fence (Figure III.39) that stretch across a mesa top on the west side of Salt Canyon. The fence extends to the west, then to the north, on the west side of the north/south boundary fence of the FCMR.

The portion west of the boundary fence is on private land and was not recorded. The first segment extends to the southeast/south from the Fort Carson boundary fence. The first 460' of this segment consists of hand-hewn juniper-post fence with two to three strands of barbed wire (Figure III.40), which changes to a linear pile of natural and axe-cut juniper and pine limbs. A single strand of barbed-wire follows the pile and is attached to living trees. This portion ends at the Salt Canyon drainage. The second segment begins on the south side of the Salt Canyon drainage and travels up slope 320' east, ending at the escarpment. This segment is a linear pile of tree limbs. The slope of the terrain crossed by the fence varies from the flat mesa top to the steeper slopes along Salt Canyon (1-15°). The sediments are shallow (20 cm) and consist of a gravelly silty sand. Sandstone bedrock and boulders are common down in the canyon. The vegetation visible along the fence includes juniper, bunch grass, pinon, cholla, wild flowers, and prickly pear cactus. The fence is in deteriorated condition primarily due to natural weathering. No artifacts were associated with the fence.



Figure III.40. View of juniper-post fence, 5FN1590. View is to the northnorthwest. Roll 9, #19.

The fence probably represents a historic property fence. The property was patented in 1913 and 1923 (Zier et al 1987:Appendix D).

Statement of Significance: The site is a historic fence with little potential for further information. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

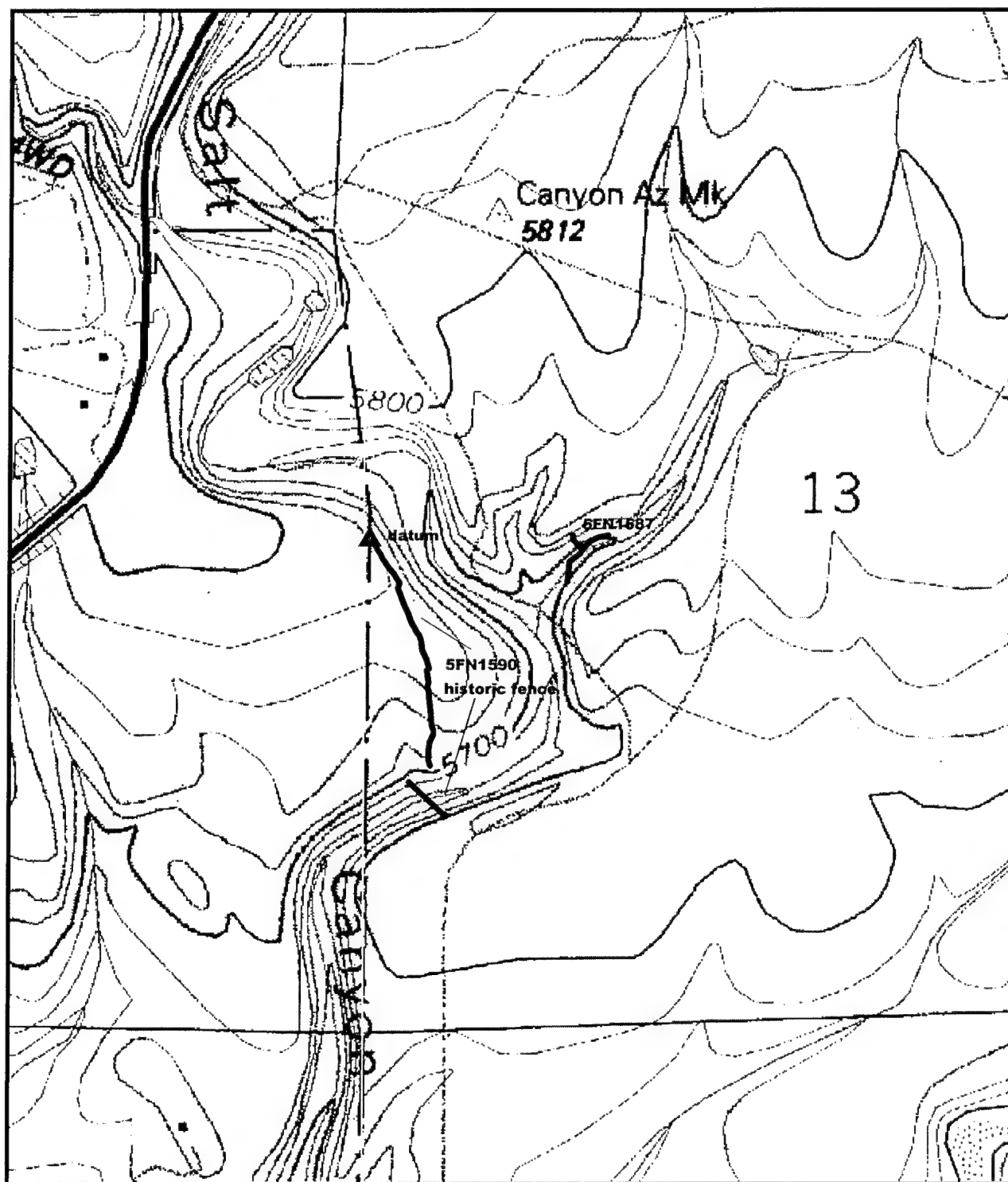
5FN1591

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6090 ft (1856 m) asl

Aspect: 240° Slope: 2°

Site Dimensions: 20 m E/W x 13 m N/S



Pierce Gulch 7.5 Quadrangle

5FN1590



60 0 60 120 Meters



Figure III.39. Site Map, 5FN1590.

The site consists of a sparse flaked-lithic artifact scatter located on the west edge of a grassy open bench above Salt Canyon to the west (Figure III.41). The slope below the bench is steep, but the bench is nearly flat. The artifacts were exposed in areas devoid of grass. Bunch grasses dominate the vegetation, which also includes prickly pear cactus, cholla, and juniper. The sediments are shallow (15-20 cm) and consist of a light brown silt. Several partially buried boulders are present along the west side of the site. The site has minor surface erosion, but is in good condition.

A total of nineteen flakes was located (Table III.36). No features, diagnostic artifacts, or tools were identified. The flake assemblage suggests that both core reduction and tool manufacturing activities took place on a limited basis. This assumption is based on the range of flake sizes, flake types, and the near equal amounts of cortex. Locally available lithic raw materials comprise the assemblage. The site represents a temporary prehistoric occupation of unknown age and cultural affiliation.

Statement of Significance: The site is recommended as not eligible to the NRHP based on the sparse number of artifacts and the low potential for buried cultural material. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1592

Site Type: Prehistoric Sheltered Site with Rock Art

Elevation: 6180 ft (1884 m) asl

Aspect: 60° Slope: 2° - 30°

Site Dimensions: 116 m E/W x 168 m N/S

This site consists of a large scatter of flaked-lithic and groundstone artifacts in association with two rock shelters (Figure III.42). The scatter is primarily located along a relatively flat slope on a north/south bench directly below and east of a sandstone cliff face. The slope below the shelters and cliff face is as great as 30°. The cliff face is exposed on the east side of a much higher bench found along a ridge line that separates Salt Canyon and a large intermittent tributary of Red Creek. The site is in a woodland setting, the vegetation consisting of primarily pinon, juniper, scrub oak, cholla, gooseberry, and prickly pear cactus. The sediments are a gravelly sandy loam that varies in depth from approximately 40 cm to over 100 cm. The site has suffered some disturbance from slope wash, and in one area several artifacts have been washed off the bench by an ephemeral drainage. The interior of the shelter exhibits evidence of some disturbance, but the exact nature of this disturbance is unknown. The impression is that the disturbance has resulted from amateurs excavating within the shelters.

The shelters consist of two connecting shelters at the base of an east facing sandstone cliff (Figure III.43). The first shelter, the larger of the two, is to the south and the second shelter is to the north. Together the shelters are 30 meters long and at a maximum 4.5 meters deep. Four rock art panels were identified on the walls of the shelters. Two images are present in the shelter 2. Panel 2 has one pecked element that may represent a turkey or a hand with an arrow. Panel 3 consists of twelve scratched vertical grooves, and one scratched horizontal groove. Panel 1 and 4 are in shelter 1. Panel 1 has five faint pecked elements that may represent zoomorph or astronomical figures (Figure III.44). Panel 4 is a faint black zoomorph pictograph with an arrow (Figure III.44). Many artifacts are also associated with the shelters. Seven metates were found in the shelters. A projectile point and a biface were found in front of Shelter 1 and a corn cob was collected from a packrat midden on a shelf along the back of Shelter 1. The corn cob has 14 rows and is consistent with prehistoric corn cobs (Matthews 1999).

Approximately 600 artifacts are present at the site. These include over 500 flakes, one silicified wood biface fragment, one chert biface fragment, one bimarginally retouched silicified wood flake, nine projectile points or point fragments, a quartz hammerstone, two quartzite sandstone manos, and eleven sandstone slab metates. A sample of 150 flaked-lithic artifacts was analyzed (Table III.37). Both classification systems used to interpret the flake assemblage indicate that tool manufacturing was the primary activity at the site with some core reduction. All raw materials are locally derived with chert

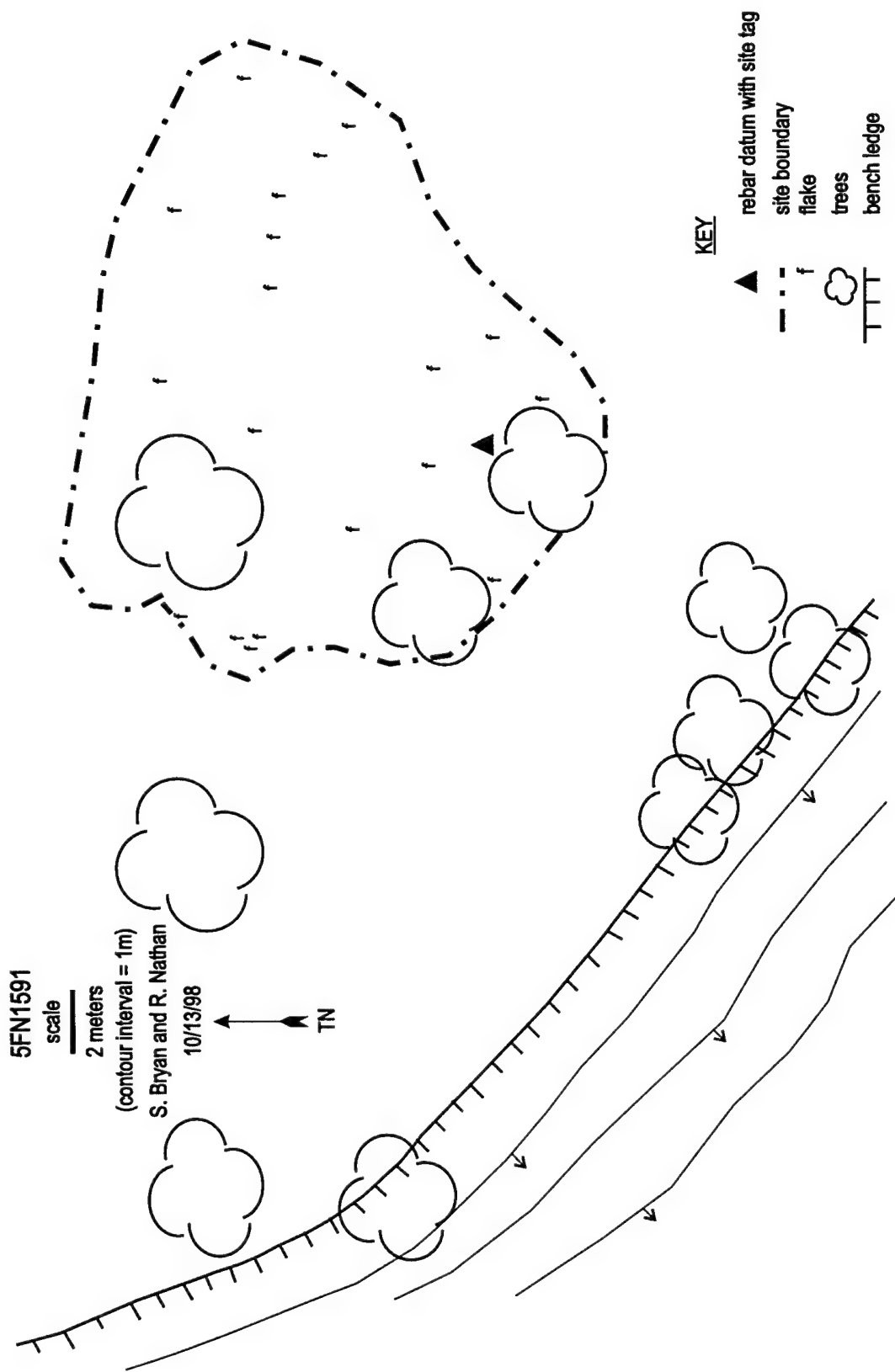


Figure III.41. Site Map, 5FN1591.

Table III.36. Flaked-lithic Debitage, 5FN1591.

Material Type										Total (%)
	Homfels and Basalts	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			6	1						7 (36.8%)
1/4"-1/2"			5	5	1					11 (57.9%)
<1/4"			1							1 (5.3%)
Total (%)			12 (63.2%)	6 (31.6%)	1 (5.1%)					19 (100%)
Flake Type										
Shatter			5	5						10 (52.6%)
Simple			5	1						6 (31.6%)
Complex			2		1					3 (15.8%)
Bifacial Thinning										
Total (%)			12 (63.2%)	6 (31.6%)	1 (5.1%)					19 (100%)
Cortex										
Present			9	2						11 (57.9%)
Absent			3	4	1					8 (42.1%)
Total (%)			12 (63.2%)	6 (31.6%)	1 (5.1%)					19 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			2							2 (10.5%)
Broken			2	1						3 (15.8%)
Flake Fragment			3		1					4 (21.1%)
Debris			5	5						10 (52.6%)
Total (%)			12 (63.2%)	6 (31.6%)	1 (5.1%)					19 (100%)

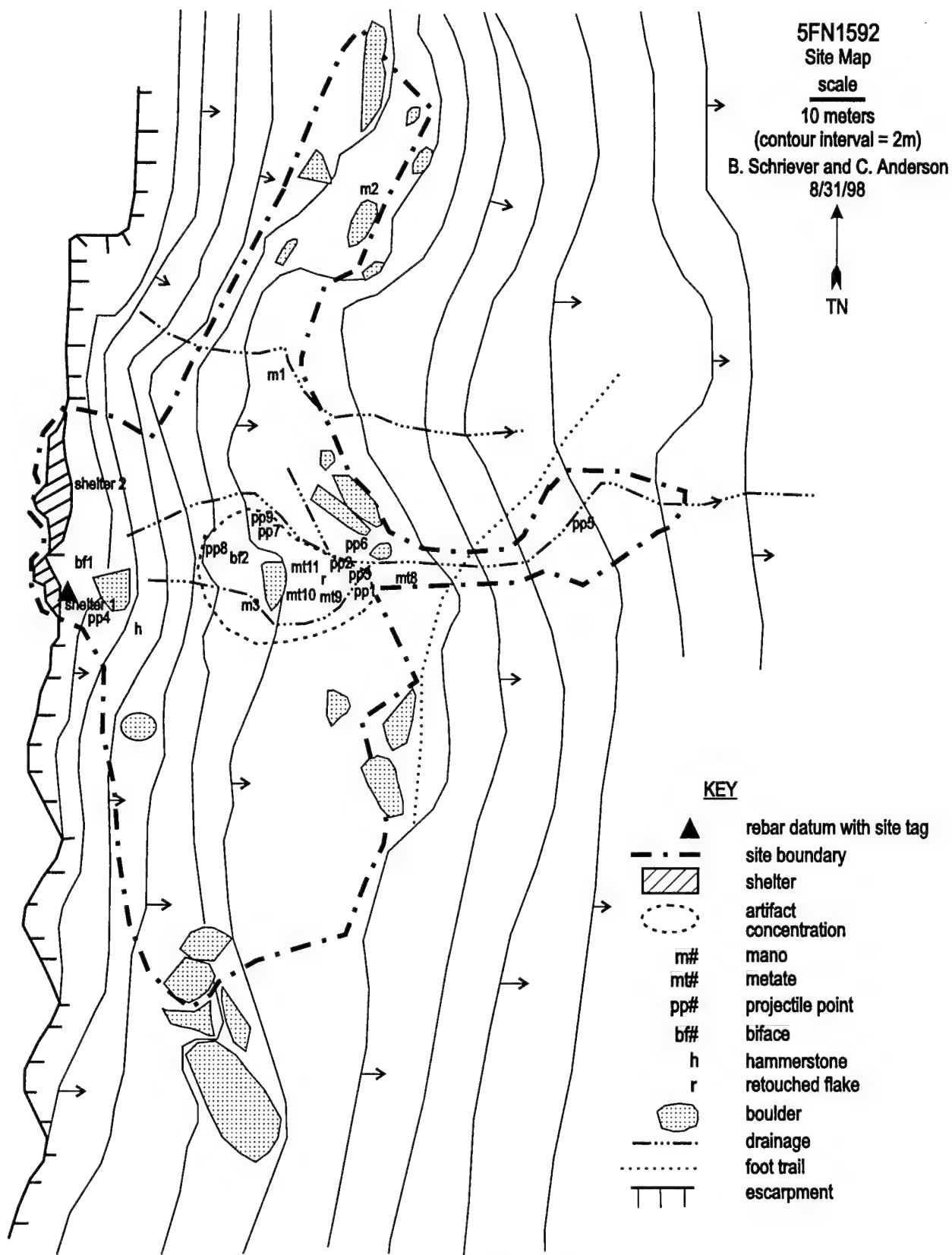
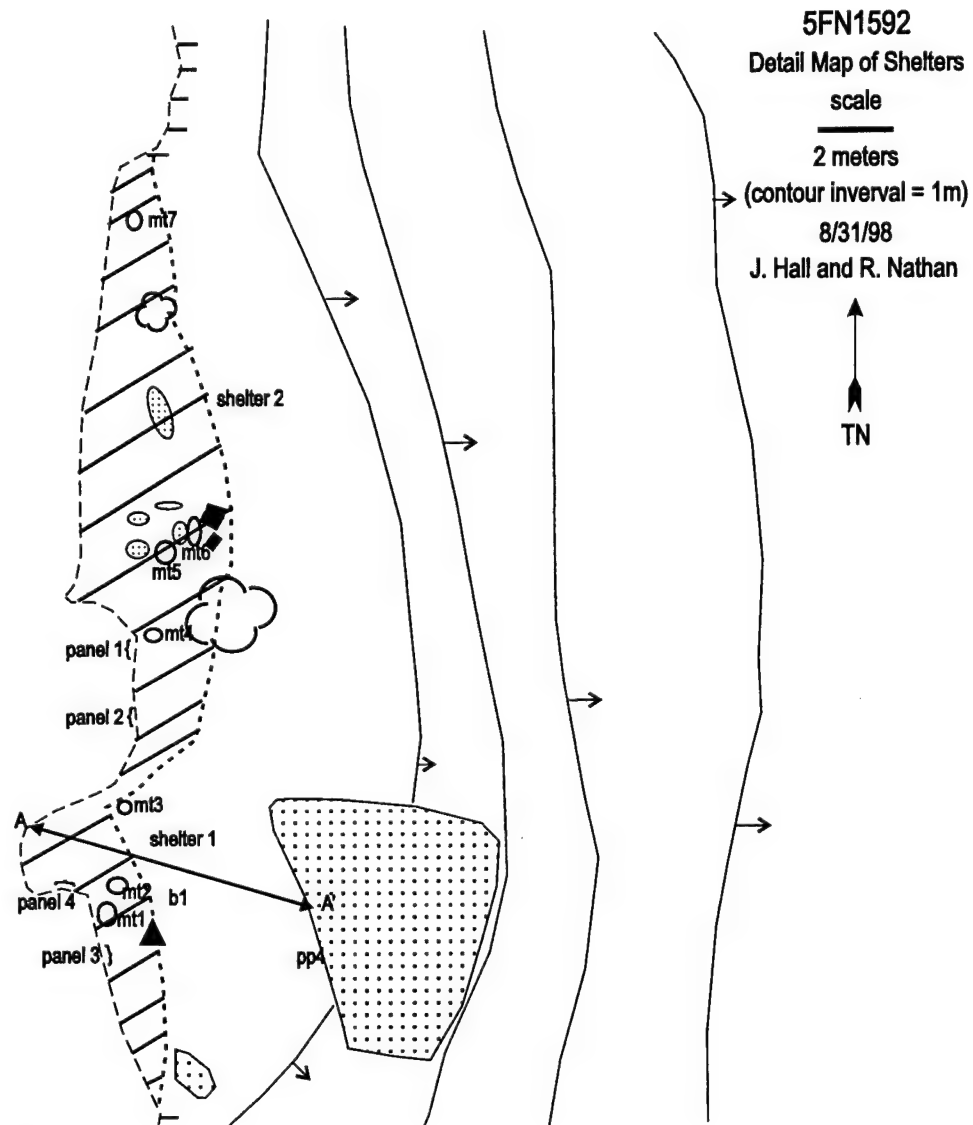
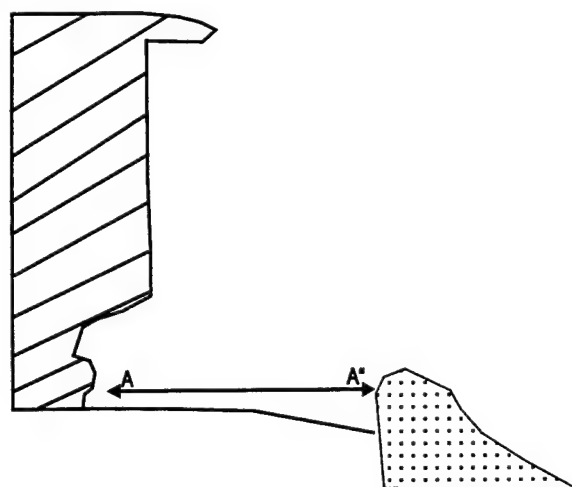


Figure III.42. SiteMap, 5FN1592.
III.99



5FN1592
Cross-section



KEY

- ▲ rebar datum with site tag
- mt# metate
- b# biface
- pp# projectile point
- rock art panel
- possible stone wall
- shelter/overhang
- back of shelter
- dripline
- escarpment
- boulder
- juniper
- cross-section

Figure III.43. Detail Map of Shelters, 5FN1592.

5FN1592
rock art panels
scale

5 cm
L. Cahenzli and M. McClung
8/31/98

Panel 1

Key
— pecked
--- crack



Panel 4

Key
— charcoal and faded charcoal

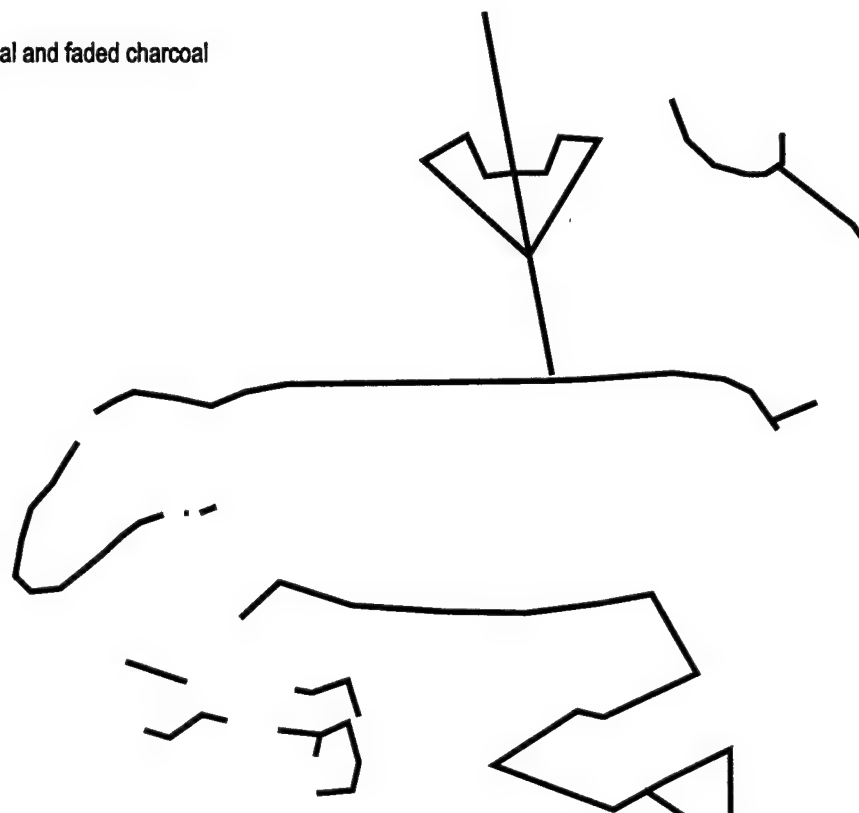


Figure III.44. Rock Art Panels 1 and Panel 4, 5FN1592.

Table III.37. Flaked-lithic Debitage, 5FN1592.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			19	30	3		2			54 (36%)
1/4"-1/2"	1		6	55	6	3				71 (47.3%)
<1/4"				23	1		1			25 (16.7%)
Total (%)	1 (.7%)		25 (16.7%)	108 (72%)	10 (6.6%)	3 (2%)	3 (2%)			150 (100%)
Flake Type										
Shatter				9	2	1				12 (8%)
Simple	1		14	44	2	2	3			66 (44%)
Complex			11	55	6					72 (48%)
Bifacial Thinning										
Total (%)	1 (.7%)		25 (16.7%)	108 (72%)	10 (6.6%)	3 (2%)	3 (2%)			150 (100%)
Cortex										
Present	1		21	30	4	2	1			59 (39.3%)
Absent			4	78	6	1	2			91 (60.7%)
Total (%)	1 (.7%)		25 (16.7%)	108 (72%)	10 (6.6%)	3 (2%)	3 (2%)			150 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			14	24	4		3			45 (30%)
Broken	1		9	36	2	1				49 (32.7%)
Flake Fragment			2	39	2	1				44 (29.3%)
Debris				9	2	1				12 (8%)
Total (%)	1 (.7%)		25 (16.7%)	108 (72%)	10 (6.6%)	3 (2%)	3 (2%)			150 (100%)

accounting for over seventy percent of the assemblage. Following Ahler and Smail (1999), the higher percentage of smaller flakes, the number of complex flakes, and the high percentage of flakes without cortex indicate that tool production was the preferred activity at the site, although core reduction is also present based on the number of large, simple flakes. Chert cores were probably initially prepared prior to being brought to the site, with middle to latter stages of reduction occurring at the site. The flake assemblage was also broken down by size grade to look at variables of material type and flake type (Table III.38). Complex flakes and simple flakes are equally prevalent in Size Grade 1 with higher percentages of complex flakes in Size Grade 2. The higher percentage of Size Grade 2 complex flakes support the assumption that latter stages of reduction, including tool production, were conducted at the site.

Interpretations about flaking activities based on Sullivan and Rosen (1985) suggest that tool manufacturing was the primary activity at the site (based on the higher percentage of broken flakes and flake fragments, which are interpreted as the result of tool manufacturing). The flake assemblage suggests that while tool manufacturing is more prevalent, core reduction activities also occurred (complete flakes and debris account for thirty-eight percent of the assemblage). The projectile points, the biface fragments, the retouched flake, and the corncob were collected. The completeness of the projectile points varies. Raw materials used for the projectile points include seven chert, one silicified wood, and one orthoquartzite.

The projectile points are generally dated from the Middle Archaic to the Middle Ceramic periods. The projectile points with enough discernable characteristics resemble Categories P12, P24, P58, and P42 from the PCMC (Lintz and Anderson (1989:124, 140, 142, and 160). Six of the nine projectile points are illustrated in Figure 7.3. Unlike many of the shelters recorded on the FCMR, this shelter is near the western border of the FCMR and has a potential to yield information on the paleoenvironment and subsistence at a site closer to the foothills. Lastly, this site has surface evidence for use and occupation during the Middle and Late Archaic periods, which would substantially add to the database of the Archaic cultures on the FCMR.

Statement of Significance: The site is a large flaked-lithic and groundstone scatter with two associated shelters. Sediment depth within the shelters, as well as along the bench, is sufficient for the potential for intact subsurface deposits that could yield significant information on the following research themes: chronology and cultural relationships, rock art, paleoclimates, settlement patterns, prehistoric economies, and possibly horticulture as defined in the CRMP (Zier et al.1997).

Management Recommendation: Avoid and Test. At least portions(i.e. rockshelter and rock art) of this very large site are clearly eligible for nomination to the NRHP. The site has likely been collected or looted in the past and is subject to slope erosion. Subsurface excavations are necessary to determine the nature and extent of buried deposits. Testing is being recommended as the first step in the development of a management plan that entail data recovery in the shelter.

5FN1593

Site Type: Prehistoric Open Site Lacking Features and Historic Homesteading-Agriculture Non-Habitation Site

Elevation: 5960 ft (1817 m)

Aspect: 194° Slope: 5°

Site Dimensions: 20 m E/W x 16 m N/S

This site consists of a very light scatter of prehistoric artifacts within a larger scatter of historic artifacts. The site is located along a southerly slope just below a ridge saddle (Figure III.45). Salt Canyon is west of the site. The artifact scatter was found adjacent to and within several shallow ephemeral drainages. The site is 11 m west of an existing north/south bladed road. A historic barbed-wire fence line runs east/west from the escarpment edge up to the west edge of the site. There is evidence of trees being chopped or cut down, possibly for use with the nearby fence. Vegetation at the site includes juniper, serviceberry, grama grass, and prickly pear cactus. The sediments are less than 30 cm in depth and consist of a gravelly light brown sandy loam. Slope wash erosion and vehicular traffic have impacted the site and displaced surface artifacts.

Table III.38. Flaked-lithic Debitage by Size Grade, 5FN1592.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	5 (16.7%)	7 (23.3%)	18 (60 %)		30 (55.6%)
Orthoquartzite		12 (63.2%)	7 (36.8%)		19 (35.2%)
Chalcedony	2 (66.7%)	1 (33.3%)	2 (66.7%)		3 (5.6%)
Quartzite					
Quartz		2 (100%)			2 (3.7%)
Silicified Wood					
Other					
Total	7 (13%)	22 (40.7%)	25 (46.3%)		54 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	4 (7.3%)	22 (40%)	29 (52.7%)		55 (77.5%)
Orthoquartzite		2 (33.3%)	4 (66.7%)		6 (8.5%)
Chalcedony		1 (16.7%)	5 (83.3%)		6 (8.5%)
Quartzite		1 (100%)			1 (1.4%)
Quartz					
Silicified Wood	1 (33.3%)	2 (66.7%)			3 (4.2%)
Other					
Total	5 (7%)	28 (39.4%)	38 (53.3%)		71 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert		15 (65.2%)	8 (34.8%)		23 (92%)
Orthoquartzite					
Chalcedony			1 (100%)		1 (4%)
Quartzite					
Quartz		1 (100%)			1 (4%)
Silicified Wood					
Other					
Total		16 (64%)	9 (36%)		25 (100%)

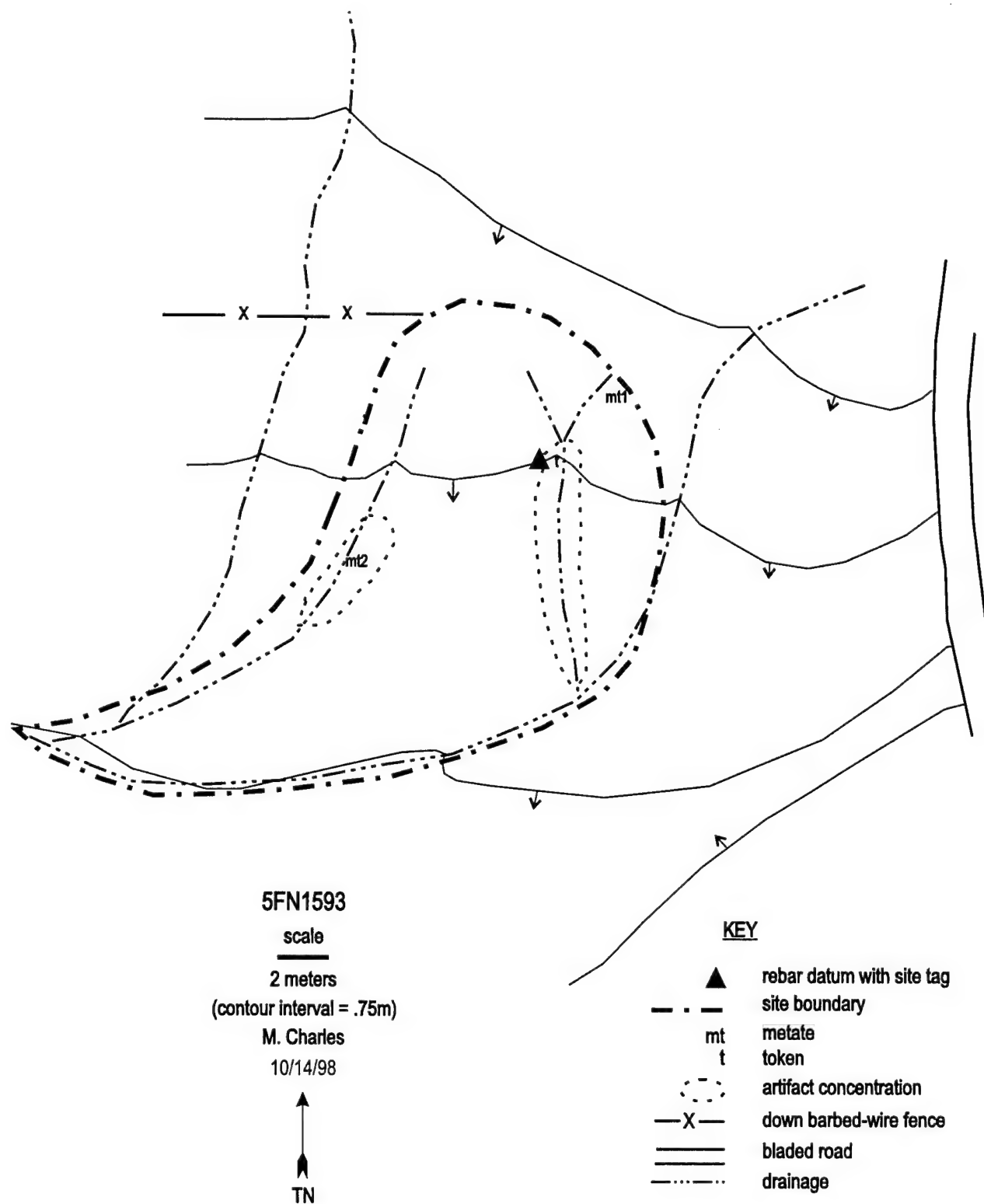


Figure III.45. Site Map, 5FN1593.

A total of five artifacts constitutes the prehistoric component. These artifacts include three orthoquartzite flakes (one piece of shatter, one simple complete flake, and one complex complete flake), and two complete sandstone slab metates. The prehistoric component represents an area of limited use and short-term site utilization of unknown age. The metates suggest that food processing may have occurred at the site, or that these artifacts were transported this far and then abandoned. The small number of flakes would indicate that little time was spent at this location. The flakes probably represent a single episode of lithic reduction using locally available orthoquartzite. The cultural affiliation and period are unknown, because no temporally artifacts are present.

The historic component consists of debris, approximately 160 metal, glass and ceramic artifacts, that may have been deposited from one of the nearby transportation routes. Metal artifacts include a few wire nails, a few wire fence staples, several pieces of barbed and smooth wire, six solder seal cans, four crimped seal cans, numerous can fragments, and one zinc trade token, which was collected (Figure 7. 7). Glass bottle fragments account for nearly half of all the historic artifacts. The bottle glass types include solarized, brown, and clear. The only noted bottle finish was a brown glass crown top molded in an automatic bottle machine. A few pieces of canning jar glass and three metal screw top canning jar lids were found, including a canning jar lid liner: "Boyd's Porcelain Cap Liner". One piece of light green window glass, a few pieces of light green pressed glass, and a few pieces of melted glass were also noted. The ceramic artifacts include ten pieces of plain whiteware and three whiteware fragments with floral design. The presence of a solarized glass, solder seal cans, and one bottle maker's mark (Owens Illinois Glass Co. 1929-1954) suggests the artifacts date from the early 1900s to the 1950s. The surrounding area has a patent date of 1902, Indemnity Land to the State of Colorado (Zier et al. 1987: Appendix E). It is more likely that the site dates to the latter part of that time span, because of the later dates on some of the artifacts; alternatively, different individuals may simply have replenished the site over time. The quantity and types of historic artifacts suggest that the scatter is refuse and does not represent the location of primary activity.

Statement of Significance: The site consists of a light scatter of historic and prehistoric artifacts. The area has been impacted by slope wash and vehicular traffic. There is little potential for intact buried deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1594

Site Type: Historic Mining and Quarrying-Related Site

Elevation: 5820-5900 ft (1774-1804 m)

Aspect: 160° Slope: 0-25°

Site Area: 47,272 m squared

This site consists of two clay quarries on opposite sides of a large tributary canyon of Red Creek (Figure III.46). The site is located on the upper slopes on both sides of the canyon just below the canyon rims. The on site slope varies from flat to steep. The quarries are connected by an existing road, part of which was created by tailings from the mine. A small east to west fence crosses the canyon between the two quarries, and is constructed of juniper posts and barbed wire. The vegetation on the site is predominantly juniper, pinon, rabbit brush, a few cottonwood trees, grasses, and prickly pear cactus. Sandstone bedrock caps the clay deposit in both areas, and the clay consists of a gray shale. The slumping of quarry walls and general reclamation activities have impacted the site.

Quarry 1 (the larger quarry) is on the west side of the canyon, and was probably mined first since the road was partially built from its tailings. Quarry 1 has a series of depressions and associated tailing piles. Portions of the back wall of this quarry have collapsed where large tabular pieces of sandstone have slumped. In at least five places along the back wall of Quarry 1, mining shafts have undercut the bedrock. These shafts range in size from 10' x 10' to 30' x 30'. One of these actually goes beneath the sandstone and then drops down into a vertical shaft where the bottom is not visible. Two features, an explosive storage box (Feature 1) and one partially buried wooden storage box (Feature 2), are associated with Quarry 1.

Feature 1 is a metal and wood storage box used presumably to store explosives related to quarrying activities. The box

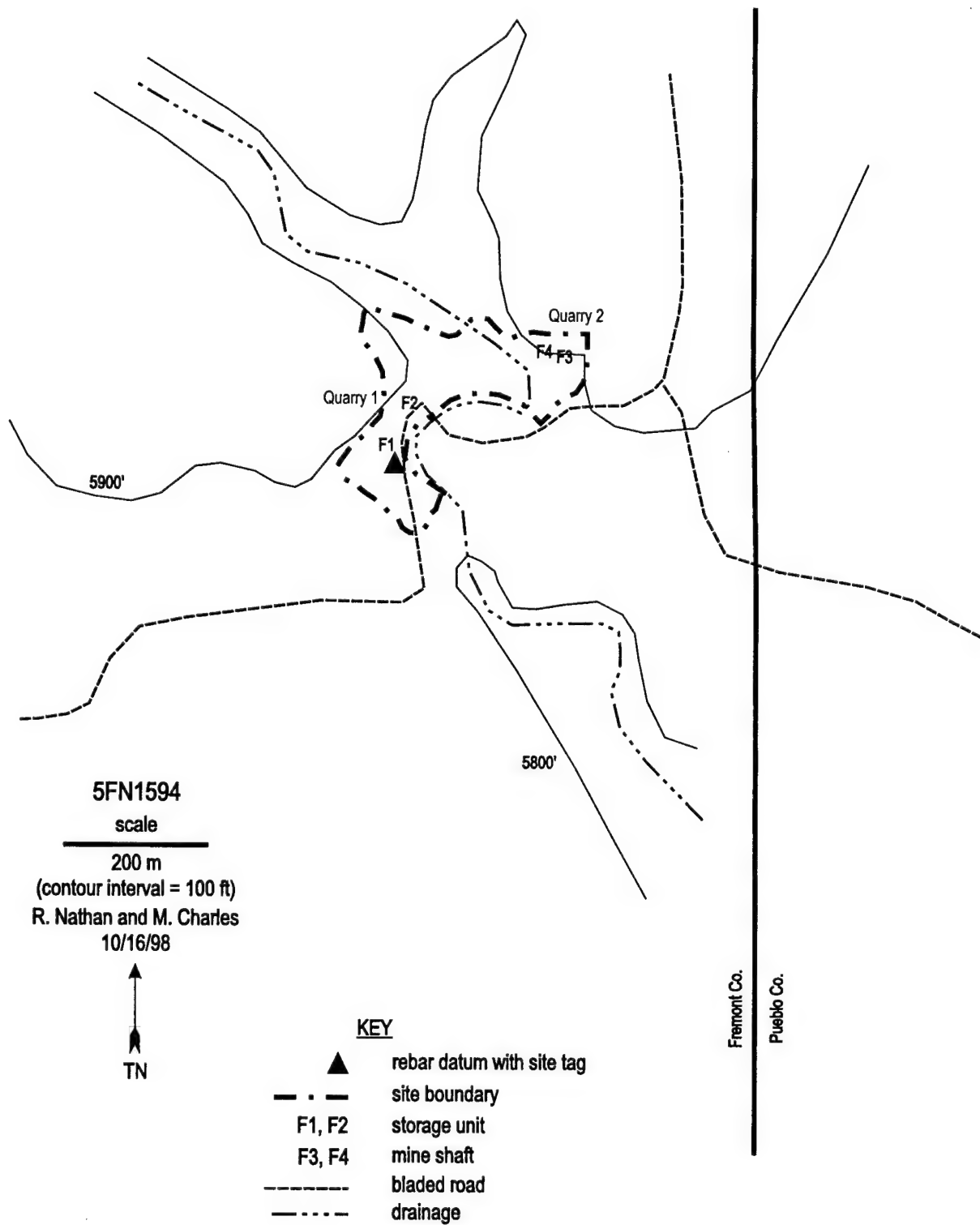


Figure III.46. Site Map, 5FN1594.

measures 51" wide x 58" high. It is constructed of sheet metal nailed over the top of 1" x 4" milled boards. The box is set back into a spoil pile so that the west and north edge facing Quarry 1 is covered. The door faces roughly south. The interior of the box is also lined with sheet metal. The door opens by a handle on the upper left side with two large hinges on the right. There is the remnant of a padlock latch on the left side of the front of the box above a movable latch that held the door shut. The box's bottom is partially covered by soil and gravel.

Feature 2 is a milled lumber storage box set into the edge of the tailings pile at Quarry 1, so that the north, east, and west walls are covered. The dimensions of the box are roughly 54" wide x 47" long x 41" high. There is no door on the front, but there is one board with a metal plate with a remnant of a 2 3/4" pipe in it on the open side. The boards are nailed together with 6" long round wire spikes. The box is not lined with metal. There is no floor to the box, and the bottom is covered with soil and gravel. The boards are deteriorating. The box was most likely for storage.

Quarry 2 is much smaller, but has two large mine shafts with beam supports (Feature 3 and Feature 4) and two smaller shafts. Quarry 2 is on the east side of the canyon. For safety reasons the shaft features were not examined closely.

Feature 3 is a horizontal mine shaft dug into the side of Quarry 2. It opens to the southwest with another small opening to the east. There are two wooden beams holding up the ceiling on the east side. Four passages have been dug into the shaft, which is approximately 24 m northeast/southwest and 18 m east/west.

Feature 4 is also a horizontal mine shaft dug into the side of Quarry 2. It opens to the southwest and the west. The main opening has 3 wood beams supporting the mouth, which is roughly 5' high x 14' long. There are three other beams lying at the entrance. There are two beams supporting the roof just beyond the first shaft to the right. There are four main passages with a large bedrock column supporting the roof. The shaft measures roughly 30 m southwest/northeast and 75 m east/west. Military trash was noted in the shaft. One support beam is cracked and splintered. Both shafts have experienced roof fall and wall slumping.

Approximately thirty metal artifacts were identified at the surface. These artifacts include one dozen can fragments, one railroad spike, one oil can, one five gallon gas can, a single allen wrench, and a few other miscellaneous metal fragments.

The area was most likely cleaned and reclaimed. Materials used at the quarry may have been reused at other quarries, leaving little behind. The site represents the remains of two historic clay quarries of yet undetermined age. The land that the quarry is on was not patented until 1922 (Zier et al.1987: Appendix D), which would indicate that the quarries did not become active until after that date.

Statement of Significance: The site is recommended as not eligible for the NRHP for lack of intact information. The documentation of the site has exhausted its research potential. However, the site should be kept off-limits because it prevents a safety hazard.

Management Recommendation: An archive search should be conducted, and the site form will be updated if necessary when archival information becomes available. No further archeological work is recommended.

5FN1595

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6235 ft (1900 m)

Aspect: 210° Slope: 0-3°

Site Dimensions: 24 m N/S x 5 m E/W

This site is on a narrow north/south bench, which slopes slightly to the south, above and west of Salt Canyon (Figure III.47). The majority of artifacts are along the site's eastern edge. Vegetation on the site includes juniper, cholla, prickly pear cactus, grama grass, short sage, and pioneer species. The sediments are 30 cm deep and consist of a tan sandy loam. An old two-track road on the west edge of the site has evidence of recent use. The majority of surface artifacts are likely the result of grading for the road. A total of 101 artifacts, including 97 flakes, one orthoquartzite core, one quartzite biface

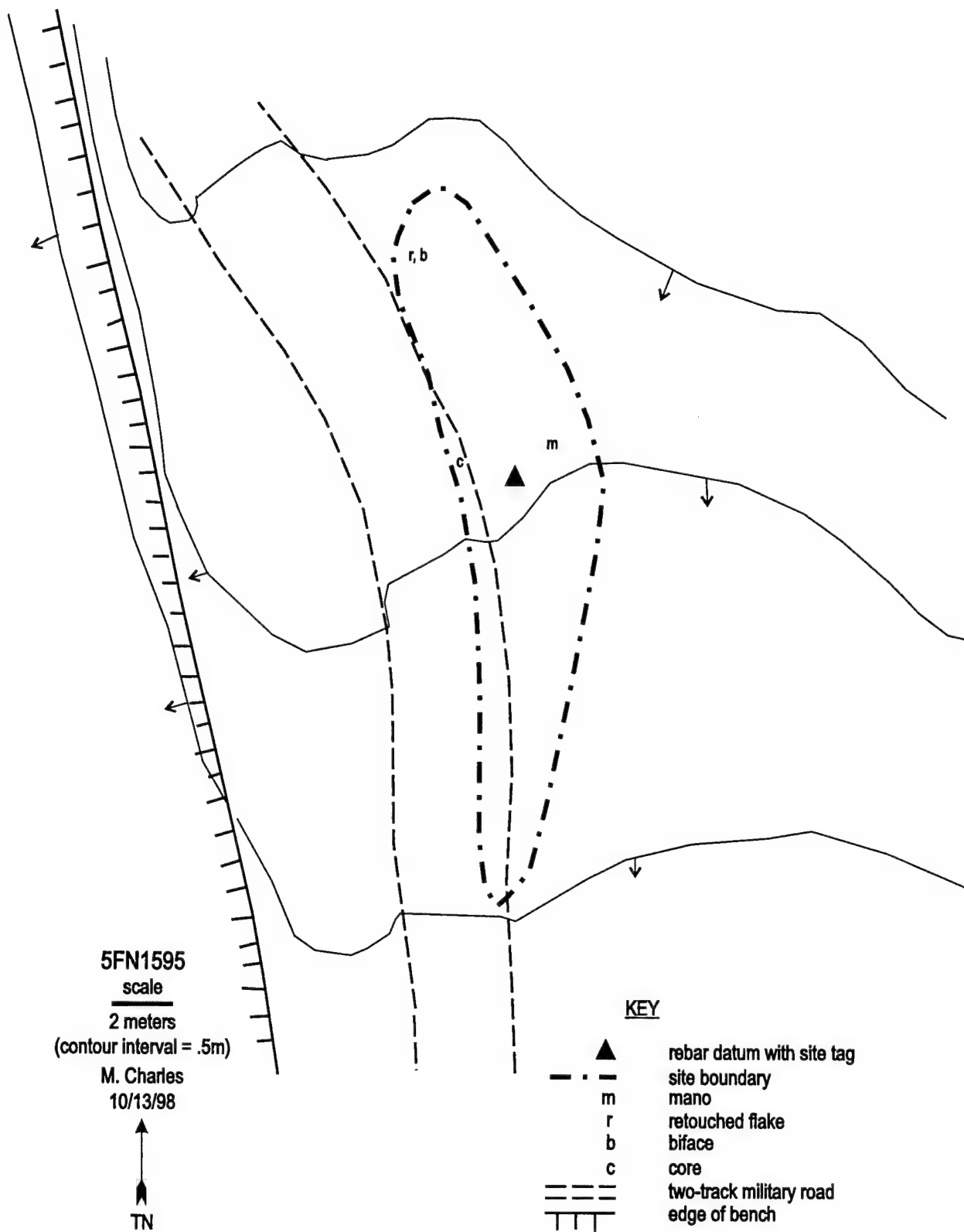


Figure III.47. Site Map, 5FN1595.

tip, one retouched chert flake, and one sandstone mano were located. The biface tip and the retouched flake were collected. And the 97 flakes were field analyzed (Table III.39). Animal bones were noted within the site boundary. Likely activities inferred from the artifacts include both core reduction and tool manufacture of orthoquartzite and, to a lesser degree, other raw materials. Both debitage analyses used to interpret the flake assemblage indicate that core reduction and tool production occurred with nearly equal frequency at the site. Using Ahler and Smail (1999), the percentage of simple and complex flakes are close to equal as is the percentage of cortex. This suggests that both activities are taking place. The flake assemblage was also separated by size grade to examine variables of material type and flake type (Table III.40). Large flakes are present at a higher rate, which suggests more of an emphasis on early stages of reduction. The higher number of complex flakes in Size Grade 1 may indicate that middle to latter stages of reduction are more prevalent. Cores, primarily orthoquartzite, were probably prepared prior to being brought to the site, and the initial stage of core reduction occurred elsewhere.

Classification under the Sullivan and Rosen (1985) system suggests that core reduction was slightly more prevalent based on the higher percentage of complete flakes and debris. Complete flakes are more indicative of initial stages of core reduction and represent half of all observed flake types. The flake assemblage has a high enough percentage of broken flakes and flake fragments that would indicate that tool manufacturing also occurred. Broken flakes and flake fragments account for forty percent of the assemblage. The lone mano suggests that plant processing also occurred. The site is of unknown cultural affiliation or age.

Statement of Significance: The site is a small artifact scatter that has been disturbed rather heavily by vehicular traffic and road construction activities. It has little potential to yield significant intact deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1596

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6100 ft (1859 m)

Aspect: 206° Slope: 6°

Site Dimensions: 7 m N/S x 2 m E/W

This site is a sparse scatter of flaked-lithic artifacts located on the southwest edge of a small hill below a sandstone escarpment on a southerly slope (Figure III.48). The hill is on a ridge separating Salt Canyon and a large tributary of Red Creek. The site is in an open area surrounded by juniper trees with minimal surface vegetation. The vegetation on the site consists of juniper, pinon, prickly pear cactus, cholla, and short grasses including grama grass. The sediments consist of a thin (<10cm) deposit of a light brown sandy loam. Sandstone bedrock is exposed at the site, which is relatively undisturbed except from some slope wash erosion.

A total of eight artifacts was observed. The artifacts consist of seven orthoquartzite flakes and one orthoquartzite core/chopper. The flakes were analyzed in the field (Table III.41). The site represents the locus of primary reduction of local orthoquartzite for the manufacture of the core/chopper. Site occupation was short term and the cultural affiliation and period of use are unknown.

Statement of Significance: The site is a very sparse artifact scatter. The shallow sediments and the amount of exposed bedrock on the surface suggest that there is little potential for significant subsurface deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

Table III.39. Flaked-lithic Debitage, 5FN1595.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			47	12	1	3				63 (65%)
1/4"-1/2"			21	9						30 (30.9%)
<1/4"			2	1	1					4 (4.1%)
Total (%)			70 (72.2%)	22 (22.7%)	2 (2.1%)	3 (3.1%)				97 (100%)
Flake Type										
Shatter			5	3		1				9 (9.3%)
Simple			36	5	1					42 (43.3%)
Complex			29	14	1	2				46 (47.4%)
Bifacial Thinning										
Total (%)			70 (72.2%)	22 (22.7%)	2 (2.1%)	3 (3.1%)				97 (100%)
Cortex										
Present			40	6		3				49 (50.5%)
Absent			30	16	2					48 (49.5%)
Total (%)			70 (72.2%)	22 (22.7%)	2 (2.1%)	3 (3.1%)				97 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			37	10		2				49 (50.5%)
Broken			14	3	1					18 (18.6%)
Flake Fragment			14	6	1					21 (21.7%)
Debris			5	3		1				9 (9.3%)
Total (%)			70 (72.2%)	22 (22.7%)	2 (2.1%)	3 (3.1%)				97 (100%)

Table III.40. Flaked-lithic Debitage by Size Grade, 5FN1595

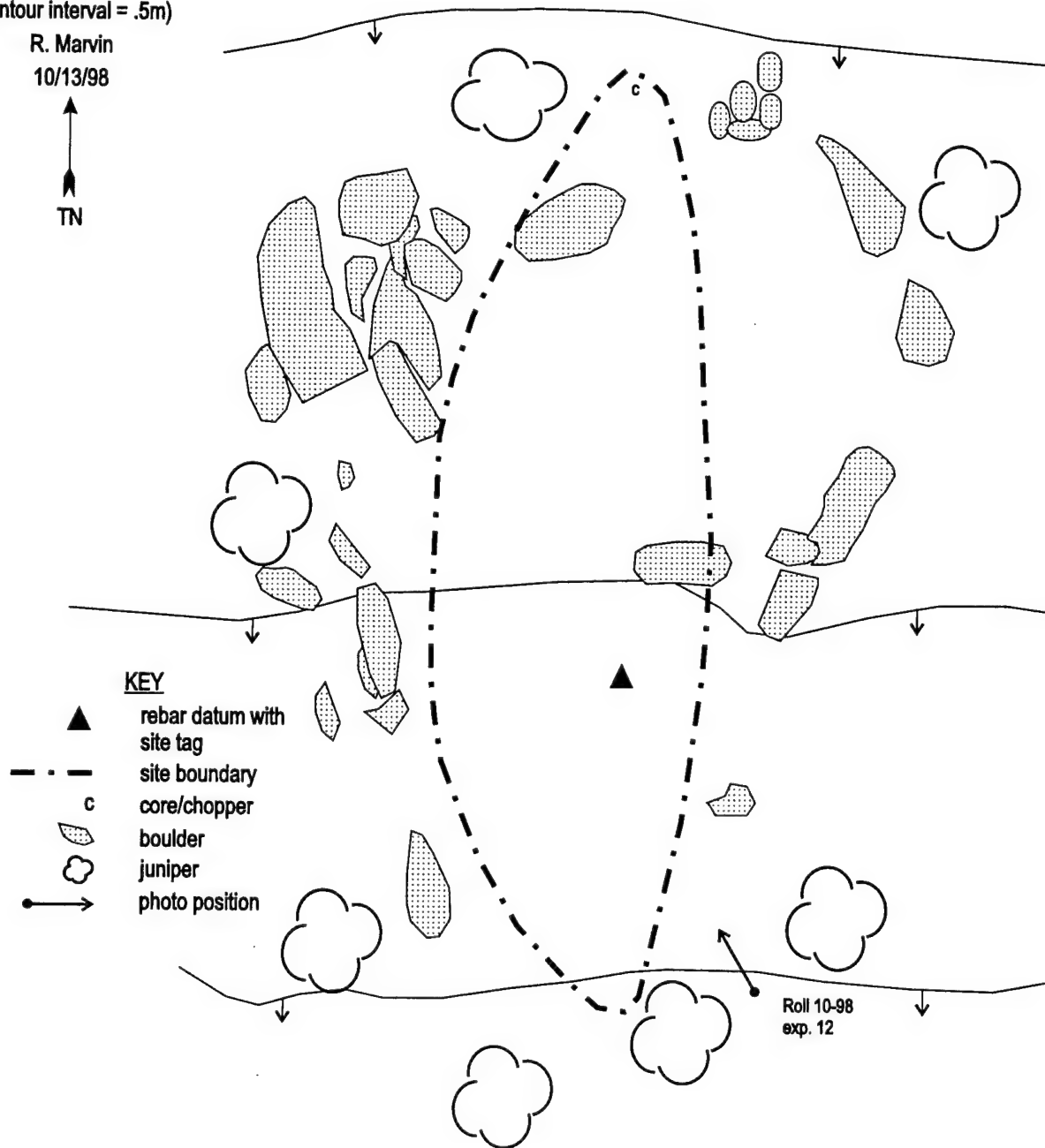
GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	2 (16.7%)	2 (16.7%)	8 (66.7%)		12 (19.1%)
Orthoquartzite	3 (6.4%)	18 (38.3%)	26 (55.3%)		47 (74.6%)
Chalcedony			1 (100%)		1 (1.6%)
Quartzite					
Quartz	1 (33.3%)		2 (66.7%)		3 (4.8%)
Silicified Wood					
Other					
Total	6 (9.5%)	20 (31.8%)	37 (58.7%)		63 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	1 (1.1%)	3 (33.3%)	5 (55.6%)		9 (30%)
Orthoquartzite	2 (9.5%)	16 (76.2%)	3 (14.3%)		21 (70%)
Chalcedony					
Quartzite					
Quartz					
Silicified Wood					
Other					
Total	3 (10%)	19 (63.3%)	8 (26.7%)		30 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert			1 (100%)		1 (25%)
Orthoquartzite		2 (100%)			2 (50%)
Chalcedony		1 (100%)			1 (25%)
Quartzite					
Quartz					
Silicified Wood					
Other					
Total		3 (75%)	1 (25%)		4 (100%)

5FN1596
 scale
 50 cm
 (contour interval = .5m)

R. Marvin
 10/13/98



Roll 10-98
 exp. 11



KEY

- ▲ rebar datum with site tag
- - - site boundary
- c core/chopper
- ◡ boulder
- ☁ juniper
- photo position

Figure III.48. Site Map, 5FN1596.

5FN1597

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6100 ft (1859 m) asl

Aspect: 96°

Slope: 4°

Site Dimensions: 13 m E/W x 5 m N/S

This site is a sparse artifact scatter in an open area located on an eroded bench situated between large sandstone boulders to the north, and a tree line to the south (Figure III.49). The artifacts are mainly exposed along an old two-track road. The site is just above and north of a modern bladed road. Vegetation includes cholla, pinon, juniper, snakeweed, prickly pear cactus, and short grasses. The sediments are a light brown sandy loam that is approximately 30 cm deep. The site has been impacted by mechanical weathering and by disturbance related to the old two-track road.

A total of thirty artifacts was located, none of which were diagnostic. The artifacts include one sandstone slab metate fragment and twenty-nine flakes (Table III.42). Local orthoquartzite comprises nearly eighty percent of all flaked-lithic artifacts. Activities inferred from the artifact assemblage include food processing and flaked-lithic reduction, with an emphasis on the early stages of core reduction. This assumption is based on the majority of larger flakes and the number of flakes with cortex (Ahler and Smail 1999) and the larger percentage of complete flakes (Sullivan and Rosen 1985). The site represents a short-term prehistoric occupation of unknown age and cultural affiliation.

Statement of Significance: The site consists of a small scatter of artifacts, with little potential to yield additional information due to its eroded state and the relatively shallow sediments. Documentation of the site has exhausted its research potential.

Management Recommendation: No further archeological work.

5FN1601

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5960 ft (1817 m)

Aspect: 147°

Slope: 2°

Site Dimensions: 45 m N/S x 35 m E/W,

This site is a sparse, but relatively large scatter of flaked-lithic and groundstone artifacts. The artifacts are on a gentle southeasterly slope above an unnamed ephemeral drainage approximately 250 m east of Salt Canyon (Figure III.50). Juniper, serviceberry, pinon, prickly pear cactus, cholla, scrub oak, and short grasses dominate the vegetation. The sandy sediments are a direct result of the decomposition of the sandstone bedrock. These residual sediments consist of a light brown sand to a sandy loam with gravel. The depth of sediments on the site ranges up to 40 cm, but are generally shallow. Slope wash erosion has displaced artifacts along the slope and the majority of artifacts are within these disturbed areas. Military foot traffic has also impacted the site area.

A total of forty-six artifacts was recorded; no diagnostic artifacts are present. The artifacts include four orthoquartzite cores, one retouched orthoquartzite flake (collected), thirty-eight flakes (Table III.43), and three sandstone slab metates. One of the metates is complete while the other two metates are broken into five different pieces. Local orthoquartzite accounts for all but five of the total number of flaked-lithic artifacts. The artifact assemblage indicates that reduction of the local orthoquartzite and food processing were the primary activities at the site. Early to middle stages of core reduction are apparent based on the presence of four cores, the number of large flakes, the majority of flakes with cortex, and observed flake types. There is a relatively equal division between simple and complex flakes, although complex flakes can represent middle stages of reduction as well as latter stages. The site represents a limited period of prehistoric occupation of unknown age and cultural affiliation.

Statement of Significance: Based on the amount of disturbance and the level of erosion, the site has limited potential to yield significant intact buried deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

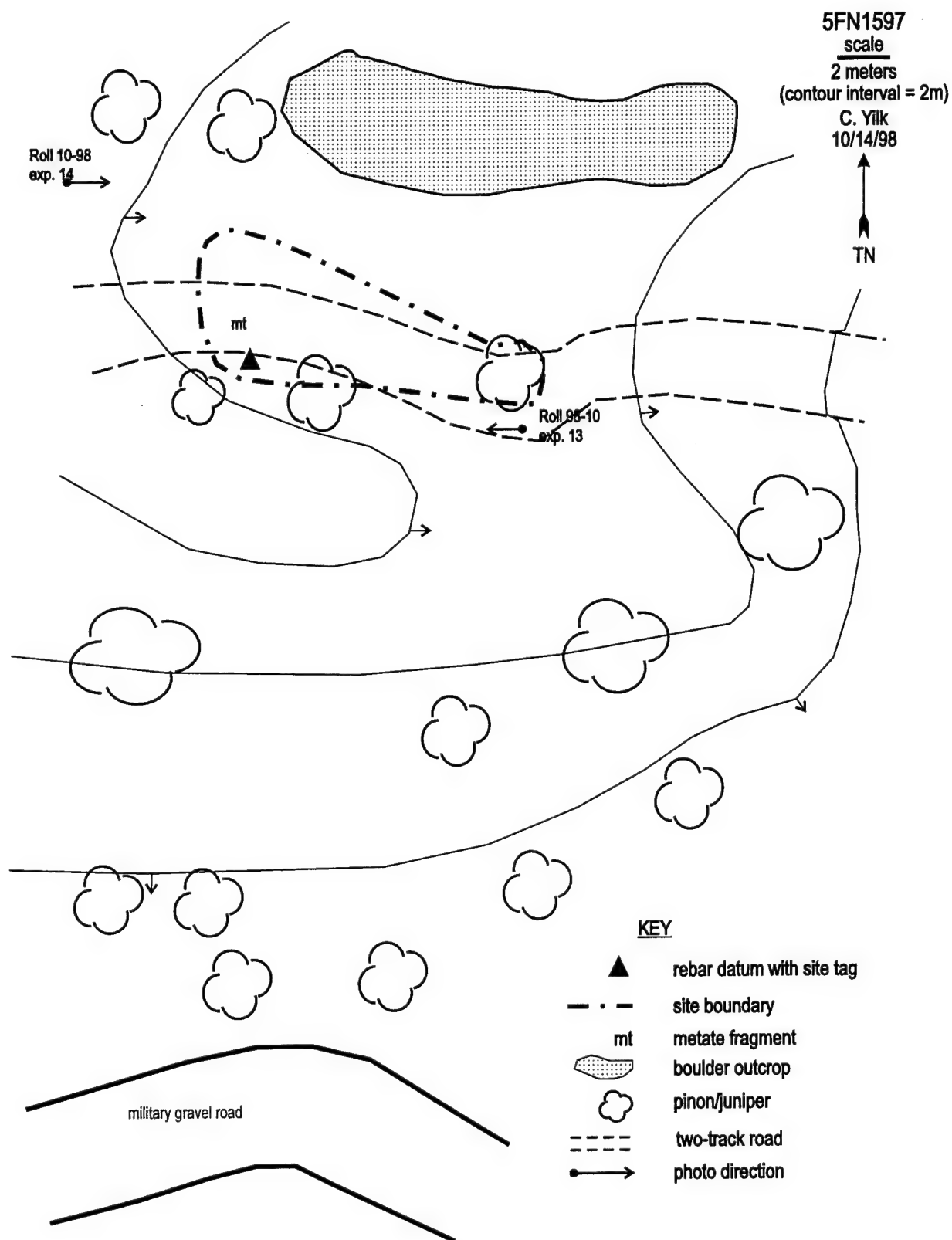


Figure III.49. Site Map, 5FN1597.

Table III.42. Flaked-lithic Debitage, 5FN1597.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			16	1	1					18 (62.1%)
1/4"-1/2"	1	1	7	1	1					11 (37.9%)
<1/4"										
Total (%)	1 (3.5%)	1 (3.5%)	23 (79.3%)	2 (6.9%)	2 (6.9%)					29 (100%)
Flake Type										
Shatter			5							5 (17.2%)
Simple			7		2					9 (31.0%)
Complex	1	1	11	2						15 (51.7%)
Bifacial Thinning										
Total (%)	1 (3.5%)	1 (3.5%)	23 (79.3%)	2 (6.9%)	2 (6.9%)					29 (100%)
Cortex										
Present	1		15	2						18 (62.1%)
Absent		1	8		2					11 (37.9%)
Total (%)	1 (3.5%)	1 (3.5%)	23 (79.3%)	2 (6.9%)	2 (6.9%)					29 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete	1		10	1	2					14 (48.3%)
Broken			5	1						6 (20.7%)
Flake Fragment		1	3							4 (13.8%)
Debris			5							5 (17.2%)
Total (%)	1 (3.5%)	1 (3.5%)	23 (79.3%)	2 (6.9%)	2 (6.9%)					29 (100%)

5FN1601
 scale
 2 meters
 (contour interval = .5m)

M. Charles
 10/14/98

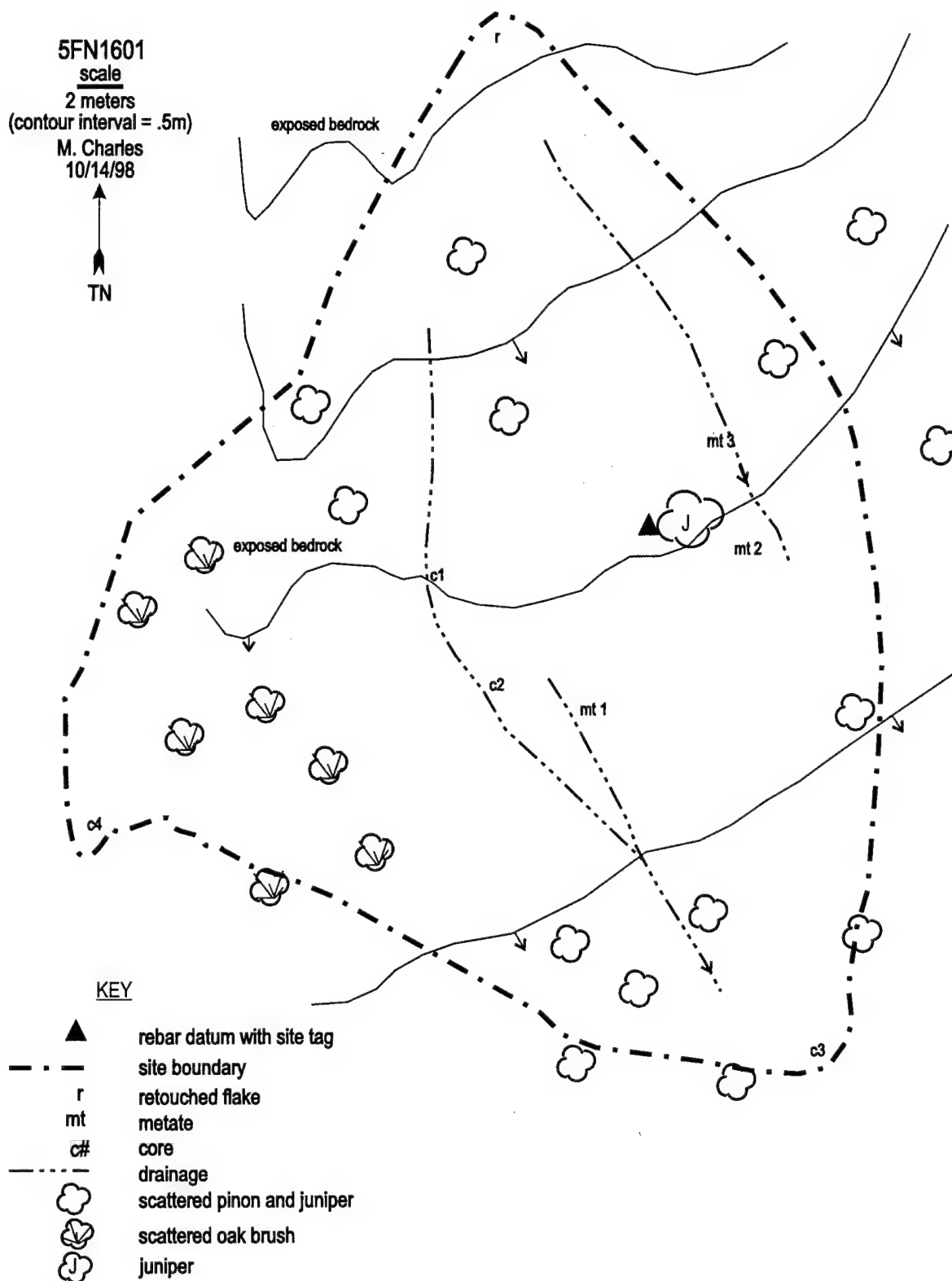


Figure III.50. Site Map, 5FN1601.

Table III.43. Flaked-lithic Debitage, 5FN1601.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			30	4	1					35 (92.1%)
1/4"-1/2"			3							3 (7.9%)
<1/4"										
Total (%)			33 (86.8%)	4 (10.5%)	1 (2.6%)					38 (100%)
Flake Type										
Shatter			2							2 (5.3%)
Simple			17							17 (44.7%)
Complex			14	4	1					19 (50%)
Bifacial Thinning										
Total (%)			33 (86.8%)	4 (10.5%)	1 (2.6%)					38 (100%)
Cortex										
Present			25	2	1					28 (73.7%)
Absent			8	2						10 (26.3%)
Total (%)			33 (86.8%)	4 (10.5%)	1 (2.6%)					38 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			16	4	1					21 (55.3%)
Broken			11							11 (29%)
Flake Fragment			4							4 (10.5%)
Debris			2							2 (5.3%)
Total (%)			33 (86.8%)	4 (10.5%)	1 (2.6%)					38 (100%)

Pueblo County

5PE2940

Site Type: Prehistoric Open Structure Site

Elevation: 5920 ft (1804 m) asl

Aspect: 270° and 90° Slope: 0°

Site Dimensions: 63 m N/S x 37 m E/W

This site comprises a flaked-lithic artifact scatter and one prehistoric structural feature. It is located on a narrow north/south-trending ridge that separates Turkey Creek Canyon and a tributary of Sullivan Canyon (Figure III.51). The vegetation on the site is predominantly pinon, juniper, cholla, prickly pear cactus, mountain mahogany, and grasses. Artifacts were found on flat surfaces and bedrock along a ridge top and on a bench below and west of the ridge top. Sediments on the ridge top consist of a shallow (10 cm) grayish brown silt. Sediment depth increases on the bench below the ridge top. The slope to the east of the site is steep; Turkey Creek is visible to the east and the Avery Ranch site (5PE56) to the southeast. The site is in good condition; military presence is minimal with less than a half dozen modern rifle cartridges noted on the entire site.

One structural feature (Feature 1) is present along the west edge of the ridge. Feature 1 consists of a circular alignment of sandstone that closes a gap in the fragmented bedrock along the edge of the ridge creating a small enclosure. The feature measures 2.5 m x 2.5 m and is constructed of approximately twenty lichen-covered pieces of tabular sandstone. Prehistoric artifacts occur within a few meters of Feature 1, and no military artifacts are associated with the feature. A pin flag probe within Feature 1 indicates about 10 cm of soil. Two other linear stone alignments are present. One may be related to military activities, since a juniper log has been incorporated in with the sandstone, or it may have simply fallen there and then part of the wall fell on it. The other possible linear alignment is too ephemeral to suggest that it represents a cultural feature.

A total of thirty-seven artifacts was located, including five artifacts found on the small bench on the west side of the ridge top. The artifacts include twenty-eight flakes, one chalcedony core, one orthoquartzite core, one silicified wood core, two chert projectile points, two silicified wood beveled scrapers, one siltstone biface fragment, and one retouched silicified wood flake. Two of the cores exhibited bidirectional flaking, while the other core was reduced unidirectionally. The tools were collected and the flakes were analyzed in the field (Table III.44). This site is very similar to other open structure sites in the vicinity of Turkey Creek, such as Sullivan Butte (5PE866) and Avery Ranch (5PE56). The location of the site in an area with a view, the paucity of artifacts, and the generally shallow soil deposition are characteristic of a number of these sites (see Charles et al. [1999b] for a review of these sites). Activities inferred from the artifact assemblage include hunting, core reduction, and tool manufacture. The greater number of large flakes, the greater number of simple flakes, and the presence of two cores suggest that core reduction was a prevalent activity (Ahler and Smail 1999). However, the Sullivan and Rosen (1985) system suggests no significant difference between core reduction activities and tool manufacturing activities. The projectile points (Figure 7.4b and 7.4c) resemble Category P51 and Category P83 projectile points identified by Lintz and Anderson (1989:175, 217). These projectile points date from the Late Early Ceramic to the Late Prehistoric periods (A.D. 750-A.D. 1700).

Statement of Significance: The site has the potential to yield significant information on the research themes of prehistoric economies, settlement patterns, architecture, and chronology and cultural relationships as outlined in Zier et al. 1997 (CRMP). Although soil deposition is shallow at the site, it does contain at least one architectural feature and two temporally diagnostic artifacts.

Management Recommendation: No Further Consideration. The structural remains that make this site eligible for nomination to the NRHP are better represented by other sites along Turkey Creek that can be more easily and effectively afforded long term protection. These sites are from the same relative time period, topographic setting, and provide better examples of the qualities that make 5PE2940 eligible for nomination to the NRHP.

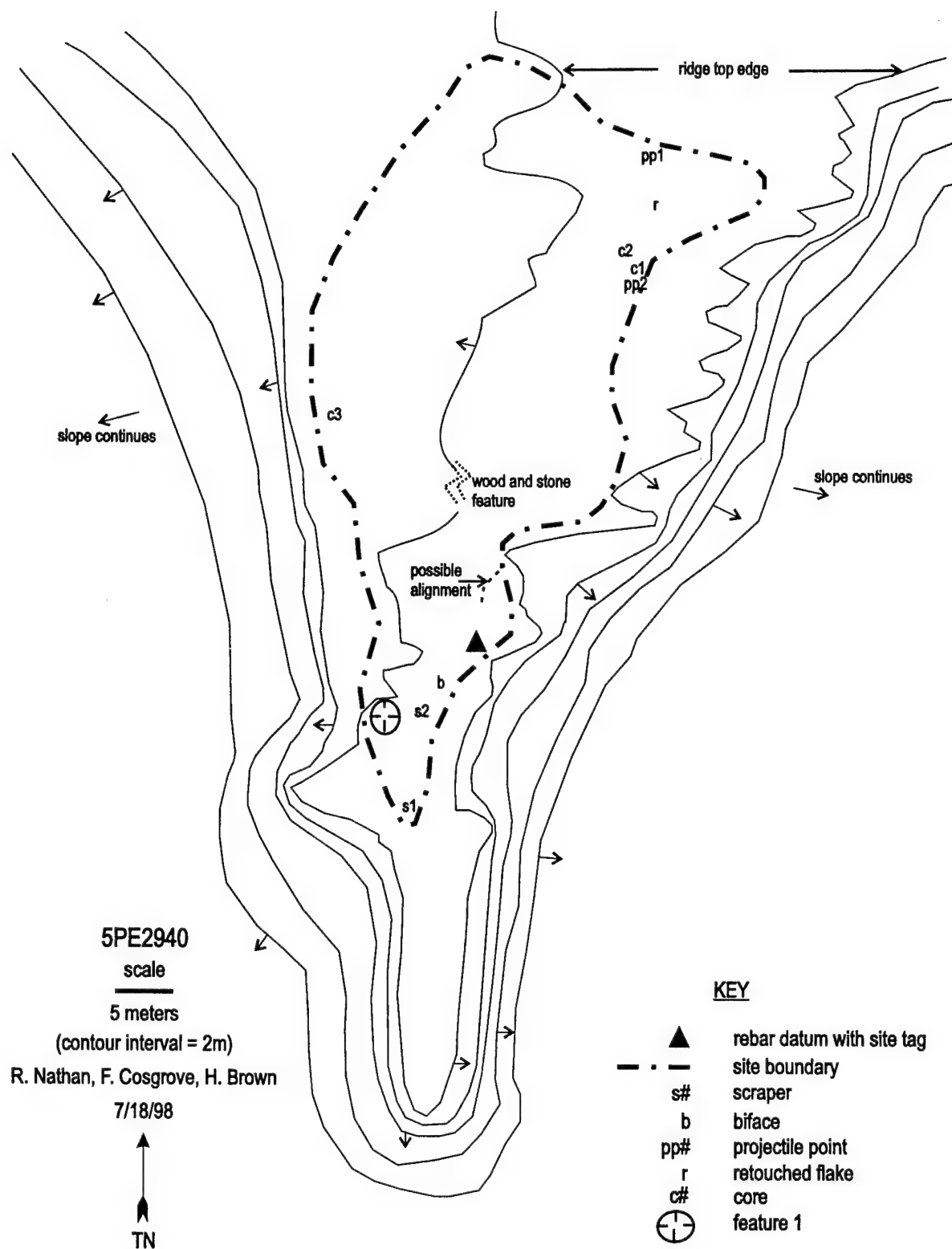


Figure III.51. Site Map, 5PE2940.

Table III.44. Flaked-lithic Debitage, 5PE2940.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			4	3	12			3		22 (78.6%)
1/4"-1/2"				2	3					5 (17.9%)
<1/4"					1					1 (3.6%)
Total (%)			4 (14.3%)	5 (17.9%)	16 (57.1%)			3 (10.7%)		28 (100%)
Flake Type										
Shatter					4			1		5 (17.9%)
Simple			3	5	9			2		19 (67.9%)
Complex			1		2					3 (10.7%)
Bifacial Thinning					1					1 (3.6%)
Total (%)			4 (14.3%)	5 (17.9%)	16 (57.1%)			3 (10.7%)		28 (100%)
Cortex										
Present				1	2			2		5 (17.9%)
Absent			4	4	14			1		23 (82.1%)
Total (%)			4 (14.3%)	5 (17.9%)	16 (57.1%)			3 (10.7%)		28 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete				3	6					9 (32.1%)
Broken			1		3			1		5 (17.9%)
Flake Fragment			3	2	3			1		9 (32.1%)
Debris					4			1		5 (17.9%)
Total (%)			4 (14.3%)	5 (17.9%)	16 (57.1%)			3 (10.7%)		28 (100%)

5PE2941

Site Type: Prehistoric Open Occupation Hearth Site
Elevation: 5400 ft (1646 m) asl
Aspect: 180° Slope: 1°
Site Dimensions: 4 m SW/NE x 1 m SE/NW

This site consists of a single hearth 30 m east of the confluence of a large intermittent tributary of Pierce Gulch and Pierce Gulch. It is exposed in the cutbank on the north side of the tributary (Figure III.52). The site is 15 m south of a bladed east/west road that crosses Pierce Gulch. The ground surface above the hearth is nearly flat with a slight southerly slope. Sediments exposed in the cutbank profile are sandy silts over one meter deep. The vegetation on the site is predominantly grasses, sunflower, juniper, and cholla. No apparent military disturbance is visible in the area, but the feature is exposed and will continue to erode.

The hearth is visible on two faces of an erosional notch in the side of the cutbank (Figure III.53). The feature is a shallow basin-shaped hearth (Figure III.54). Charcoal is exposed in the hearth and oxidation is present along the base. Larger pieces of limestone gravels cap the feature. Additional charcoal was noted at the base of the upper soil stratum. It is possible that this charcoal-enriched stratum may represent a buried soil that is related to the feature. No artifacts were found in association with the hearth. A carbon sample was taken from the hearth, and a conventional radiocarbon age of 1940 \pm 70 B.P. (Beta-129180) was obtained (Appendix IV).

Statement of Significance: The radiocarbon assay places the hearth within the Late Archaic to Early Ceramic periods at FCMR. The site has the potential to yield significant information on the research themes of prehistoric economies, settlement patterns, and chronology and cultural relationships as defined in CRMP (Zier et al. 1997).

Management Recommendation: Data Recovery. The site is actively being impacted by erosion and little may remain of significant deposits that make this site eligible for nomination to the NRHP.

5PE2942

Site Type: Historical Homesteading/Agriculture-Related Non-Habitation Site
Elevation: 5490 ft (1673 m) asl
Aspect: 340° Slope: 2°
Site Dimensions: 60 m N/S x 30 m E/W

This site consists a scatter of historic artifacts located next to a canyon rim (Figure III.55). The canyon rim is near the edge of a mesa that overlooks a tributary of Pierce Gulch, which lies to the north. A few juniper trees, some of which show signs of having been chopped down and/or burned, are in the vicinity. Other vegetation on the site includes grasses, pinon, fringe sage, cholla, prickly pear cactus, and sunflowers. The surface slopes gently and is covered with limestone gravels. The sediments are shallow (15-20 cm) and consist of a brown, gravelly silty sand. The site has been heavily disturbed by tank trails and other military activity, in addition to minor erosion.

Approximately two hundred historic artifacts were found including metal, glass, and ceramics. Bottle glass accounts for nearly three-quarters of all artifacts. The only bottle finishes noted were screw-top bottles made in automatic bottle machines; of these several are amber clorox bottles. Various colors of bottle glass were noted including amber, clear, aqua, light green, and dark green. A few pieces of milk glass and pressed glass were also noted. Ceramics include whiteware and earthenware. The whitewares are both undecorated and decorated with floral motifs. The earthenware may be the remains of a flower pot. Metal artifacts include cans, a metal oil funnel, a pry-out paint-can lid, and a metal screw cap. The cans include two crimped seam hole-in-cap cans, five sanitary cans, several can fragments, three tobacco tins, and one "Calumet Baking Powder, 1lb, Absolutely Pure Made in USA" lid. Artifacts collected include one complete amber "Chesebrough" bottle, one whiteware ceramic with a maker's mark (incomplete and unidentifiable), and one clorox bottle finish.

5PE2941
Site Map
scale
5 meters
(contour interval =2m)
F. Cosgrove
7/22/98

↑
↓
TN

large tributary of Pierce Gulch

flat area

KEY

- ▲ rebar datum with site tag
- - - site boundary
- ☁ tree
- === bladed road
- . - . drainage
- └└└ escarpment
- ◼ limestone boulders

The map shows a topographic site with various features. A north arrow points upwards, labeled 'TN'. A scale bar indicates 5 meters. The map includes a 'large tributary of Pierce Gulch' and a 'flat area'. A key defines symbols for a rebar datum with site tag (▲), site boundary (- - -), tree (☁), bladed road (===), drainage (- . - .), escarpment (└└└), and limestone boulders (◼). The map also shows contour lines, a road, and a drainage system.

III.124

5PE2941

Inset Site Map
scale

1 meter

(contour interval = 1m)

S. Bryan and R. Nathan

10/18/98

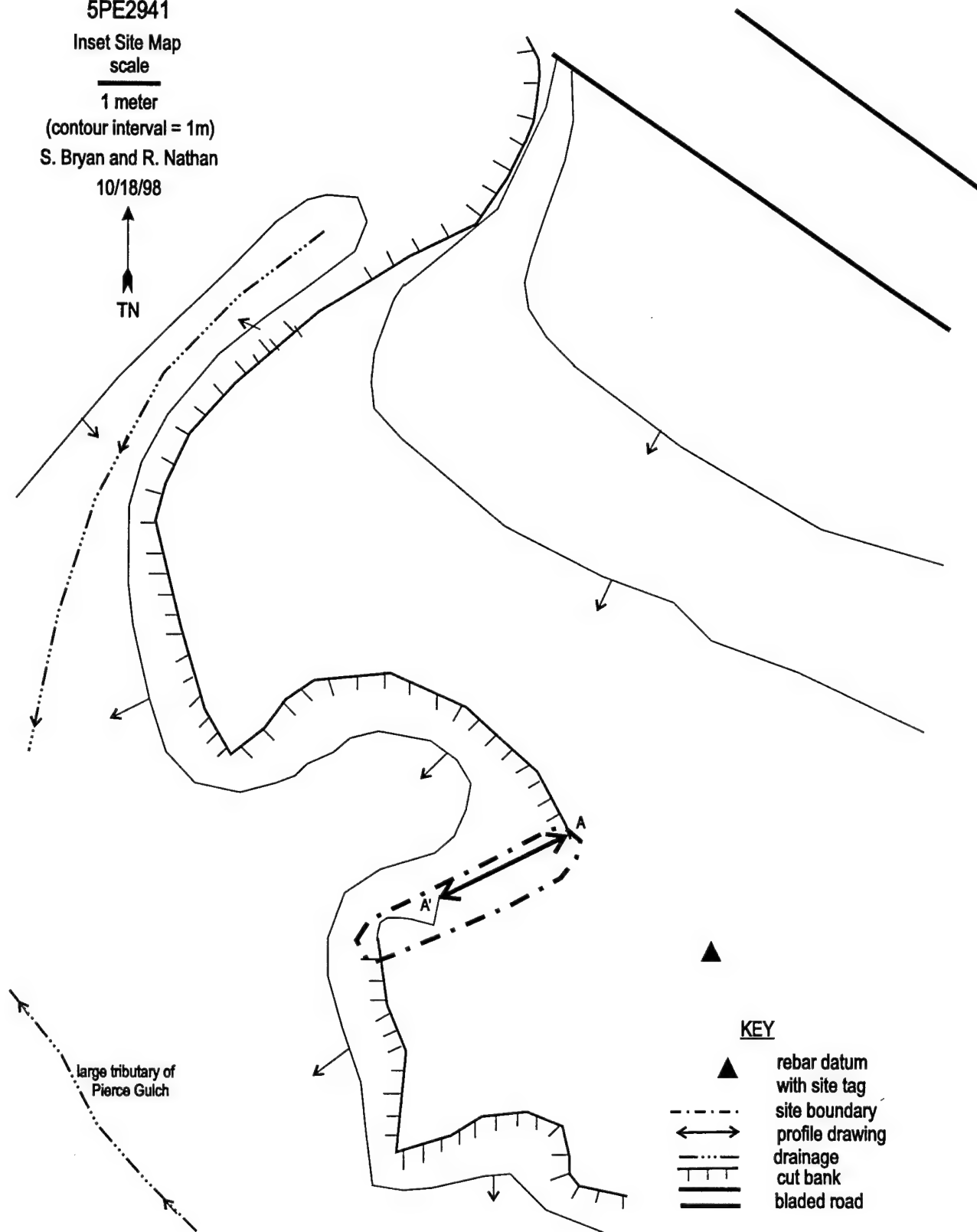


Figure III.53. Inset Site Map, 5PE2941.

5PE2941

Profile of Feature in Outbank

scale

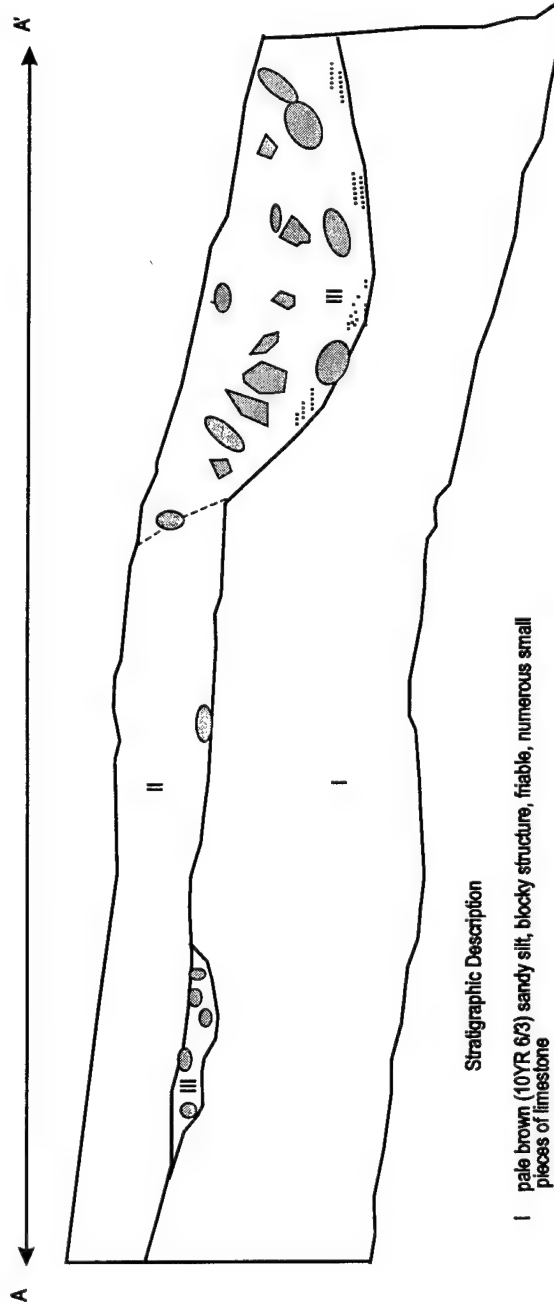
20 cm

10/18/98

R. Nathan

KEY

- I - III stratigraphic units
- limestone
- oxidation
- inferred boundary



Stratigraphic Description

- I pale brown (10YR 6/3) sandy silt, blocky structure, friable, numerous small pieces of limestone
- II light yellowish-brown (10YR 6/4) sandy silt, weak blocky structure, friable, fewer pieces of limestone than in Stratum I, limestone is more numerous at the surface
- III light yellowish-brown (10YR 6/4) sandy silt, loose, charcoal mottling, some oxidation, feature matrix

Figure III.54. Profile, 5PE2941.

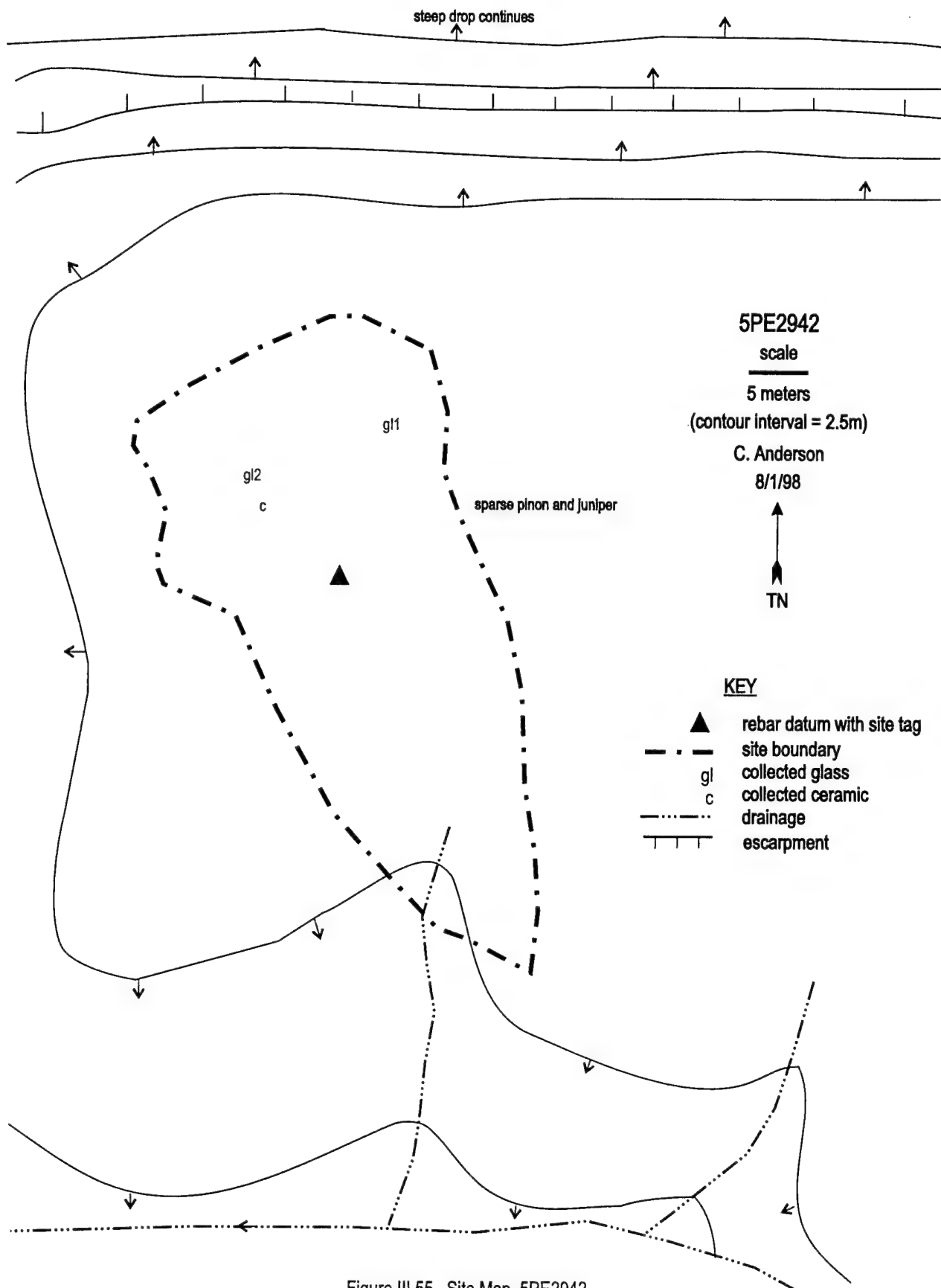


Figure III.55. Site Map, 5PE2942.

The "Chesebrough" bottle was manufactured from 1908-1950 (Fike 1987:56). The site is the remains of a historic trash dump that most likely dates to the 1930s-1950s. The land was originally patented in 1891 as a State of Colorado School Selection (Zier et al. 1987: Appendix E).

Statement of Significance: The site has limited research potential based on the absence of features, its overall eroded condition, and the limitations of the data. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2943

Site Type: Historical Homesteading/Agriculture-Related Non-Habitation

Elevation: 5480 ft (1670 m) asl

Aspect: 180° Slope: 2°

Site Dimensions: 32 m N/S x 25 m E/W

This site consists of a scatter of historic artifacts located near the western edge of a mesa overlooking Pierce Gulch, and is alongside an east/west two-track road that parallels a large power line (Figure III.56). The surface slopes slightly to the south and is heavily disturbed by the powerline and the two-track road. Vegetation on the site is predominantly grasses, fringe sage, and sunflowers. A few juniper and pinon trees are also noted in the surrounding area. The sediments consist of a gravelly, brown silty sand that is about 15 cm deep.

Approximately 160 historic metal, glass, and plastic artifacts were located. The three plastic artifacts are two red hourglass-shaped beads and one red button. The remaining number of artifacts is evenly split between glass and metal. Bottle glass is the single most common artifact. A few pieces of light green and cobalt blue glass are present, but most of the bottle glass is clear. The bottle finishes were continuous thread. Other glass artifacts include window glass, milk glass, decorative pink glass, and decorative yellow glass. One artifact was collected, a complete, clear perfume bottle. Metal artifacts include a dozen sanitary cans, can fragments, smooth wire, and a few pieces of miscellaneous metal.

The site represents the remains of a historic trash dump that most likely dates to the 1930s-1950s. One of the clear glass bottle fragments has a maker's mark from the Owens Illinois Glass Company that dates from 1929-1954 (Toulouse 1971:403). The land was originally patented in 1891 as a State of Colorado School Selection (Zier et al. 1987: Appendix D).

Statement of Significance: The site has limited research potential based on the absence of features, the lack of any potential for buried remains, the poor condition of the site, and the limitations of the data. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2944

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5910 ft (1801 m) asl

Aspect: 45° Slope: 1°

Site Dimensions: 7 m N/S x 7 m E/W

This site is a small flaked-lithic artifact scatter located in an open, flat area along the east side of a narrow northwest/southeast- trending ridge that separates two tributaries of Pierce Gulch (Figure III.57). A two-track road runs along the north side of the site. The vegetation on the site is predominantly juniper, mountain mahogany, grasses, and pinon. The artifacts are exposed in an area that is covered with limestone gravels. The gravelly silt sediments are 15 cm deep. The surface of the site exhibits minor erosion, but otherwise is in good condition.

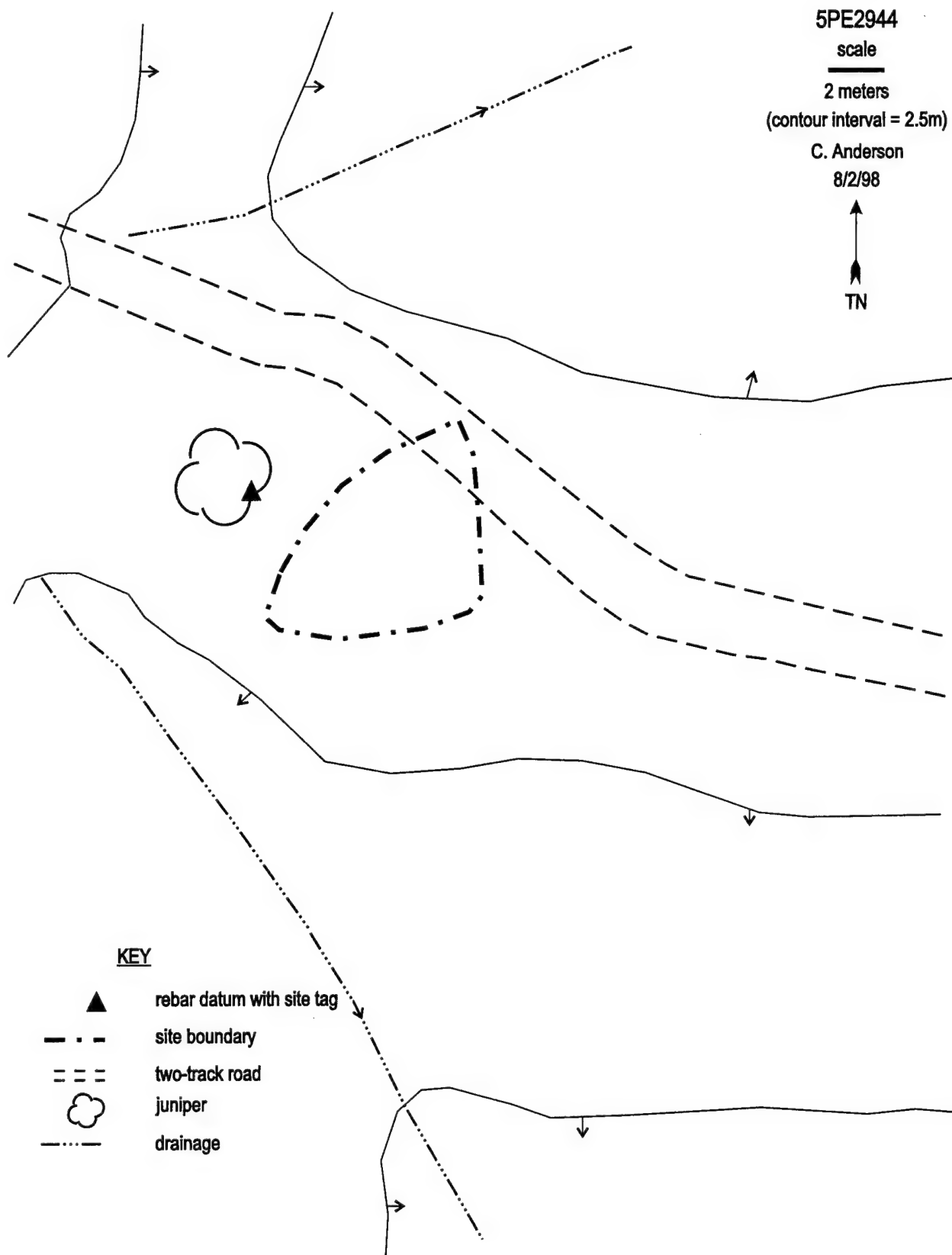


Figure III.57. Site Map, 5PE2944.

A total of seven flakes was recorded (Table III.45). Local raw materials were utilized. Due to a lack of temporally diagnostic material, the site represents a temporary occupation of unknown age and cultural affiliation.

Statement of Significance: The site is not eligible for recommendation to the NHRP, based on the small number of artifacts and the low potential for a buried cultural deposit. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2945

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6030 ft (1838 m) asl

Aspect: 90° Slope: 2°

Site Dimensions: 55 m NW/SE x 50 m NE/SW

This site consists of a concentration of flaked-lithic artifacts and one groundstone artifact. It is located in a flat area near the southwestern edge of a mesa top south of Orchard Canyon (Figure III.58). The artifacts are concentrated in areas that have been disturbed and lack surface vegetation. The vegetation on the site is dominated by prairie grasses, pinon, juniper, prickly pear cactus, and cholla. Numerous open areas are present with trees dotting the surrounding areas. The sediments are characterized by a brown sandy loam that is about 10 cm deep. The site has been impacted by military vehicular traffic that in turn has heightened slope wash disturbance.

A total of twenty-seven artifacts was recorded. The artifacts include twenty-three flakes, an orthoquartzite core fragment, an orthoquartzite hammerstone, a sandstone mano fragment, and a silicified wood projectile point (collected). The flakes were analyzed in the field (Table III.46). The lithic raw material types present include a wide range of materials local to the region: chalcedony, quartz, orthoquartzite, silicified wood, quartzite, and chert. The artifact assemblage suggests that core reduction, tool manufacture, food processing and hunting were the primary activities. With regard to either flake classification system, there is no greater emphasis on either core reduction or tool manufacturing. The projectile point is similar to Type 14, identified from excavations at Recon John Shelter (Zier 1989:141). This type is dated to the Early to Middle Ceramic periods (A.D.200-1000).

Statement of Significance: The site is a light scatter of artifacts in an area that is experiencing disturbance from slope wash and vehicular traffic. Sediment depth is shallow and artifacts mostly occur within disturbed areas. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2946

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6020 ft (1835 m) asl

Aspect: Open Slope: 0°

Site Dimensions: 100 m NW/SE x 62 m E/W

This site consists of a flaked-lithic and ground-stone scatter located in a flat area at the northwestern edge of a northwest/southeast- trending mesa top that overlooks Orchard Canyon to the north (Figure III.59). The artifact concentrations occur along the tree line at the north end of the site. The site is primarily south of the tree line where the vegetation includes short prairie grasses and prickly pear cactus. Sediment deposition varies from 50 cm to surface bedrock exposures along the mesa rim. Soil depth increases away from the rim and consists of a brown sandy loam. The site is moderately disturbed by the military with extensive vehicular disturbance along the rim beyond the site boundary. The site is in a good location for stacked stone features, such as other sites along mesa rims; however, the mesa rim is heavily disturbed, and any possible features along the rim have been disturbed or obscured by military activities. Besides the vehicular disturbance, cans, rifle cartridges and broken glass are present in the area.

Table III.45. Flaked-lithic Debitage, 5PE2944.

Material Type								Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone
Size								
>1/2"		1		1				2 (28.6%)
1/4"-1/2"				5				5 (71.4%)
<1/4"								
Total (%)		1 (14.3%)		6 (85.7%)				7 (100%)
Flake Type								
Shatter		1		1				2 (28.6%)
Simple								
Complex				5				5 (71.4%)
Bifacial Thinning								
Total (%)		1 (14.3%)		6 (85.7%)				7 (100%)
Cortex								
Present		1		5				6 (85.7%)
Absent				1				1 (14.3%)
Total (%)		1 (14.3%)		6 (85.7%)				7 (100%)
Flake Type (Sullivan and Rosen 1985)								
Complete								
Broken				2				2 (28.6%)
Flake Fragment				3				3 (42.9%)
Debris		1		1				2 (28.6%)
Total (%)		1 (14.3%)		6 (85.7%)				7 (100%)

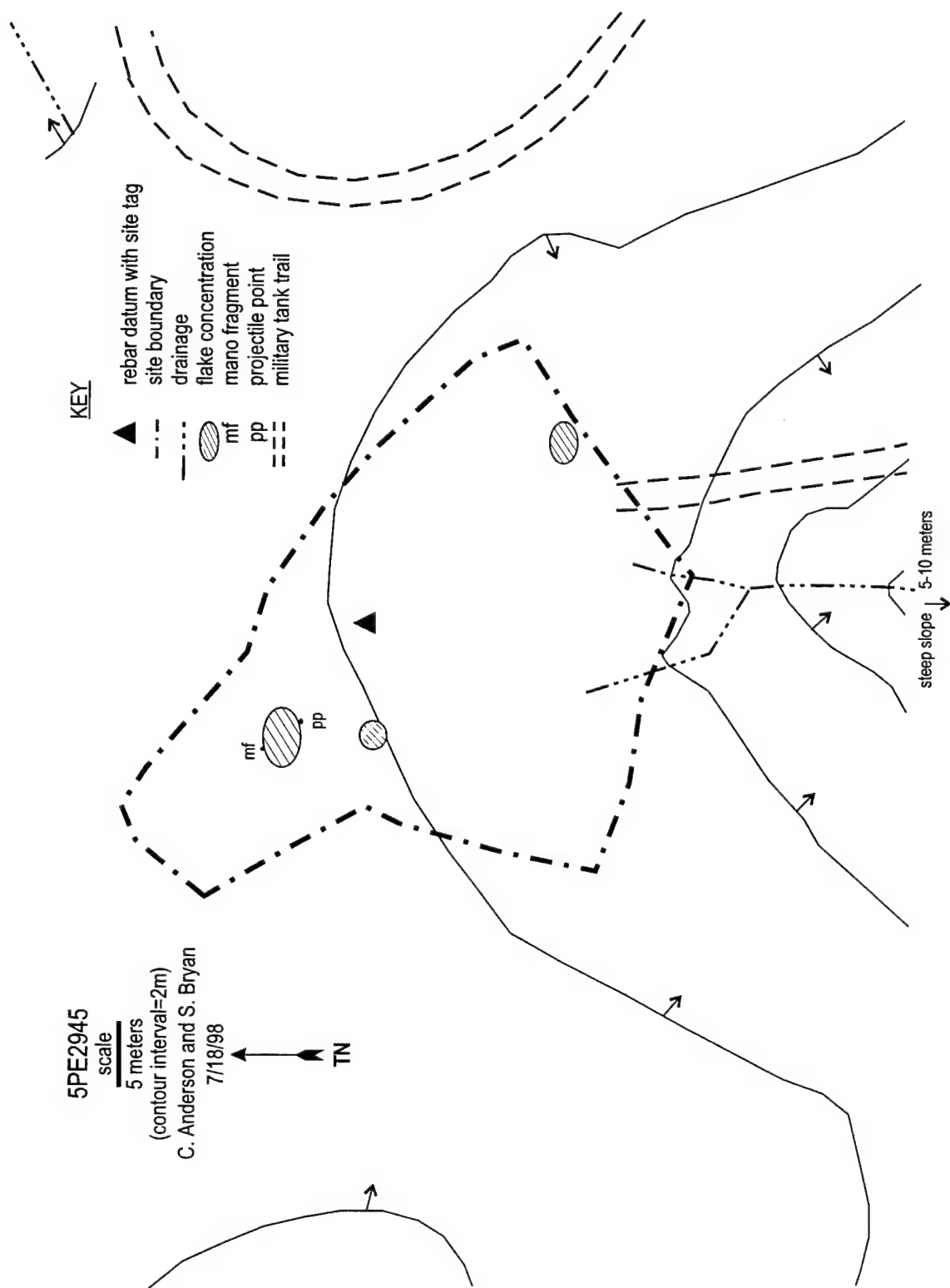


Figure III.58. Site Map, 5PE2945.

Table III.46. Flaked-lithic Debitage, 5PE2945.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"	1	3	3	4	1		1			13 (56.5%)
1/4"-1/2"			1	1	4	1	1			8 (34.8%)
<1/4"		2								2 (8.7%)
Total (%)	1 (4.4%)	5 (21.7%)	4 (17.4%)	5 (21.7%)	5 (21.7%)	1 (4.4%)	2 (8.7%)			23 (100%)
Flake Type										
Shatter		3			1	1	2			7 (30.4%)
Simple		2	2	1	2					7 (30.4%)
Complex	1		2	3	2					8 (34.8%)
Bifacial Thinning				1						1 (4.4%)
Total (%)	1 (4.4%)	5 (21.7%)	4 (17.4%)	5 (21.7%)	5 (21.7%)	1 (4.4%)	2 (8.7%)			23 (100%)
Cortex										
Present				1	2		2			5 (21.7%)
Absent	1	5	4	4	3	1				18 (78.3%)
Total (%)	1 (4.4%)	5 (21.7%)	4 (17.4%)	5 (21.7%)	5 (21.7%)	1 (4.4%)	2 (8.7%)			23 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete	1		1	2						4 (17.4%)
Broken			1	2	2					5 (21.7%)
Flake Fragment		2	2	1	2					7 (30.4%)
Debris		3			1	1	2			7 (30.4%)
Total (%)	1 (4.4%)	5 (21.7%)	4 (17.4%)	5 (21.7%)	5 (21.7%)	1 (4.4%)	2 (8.7%)			23 (100%)

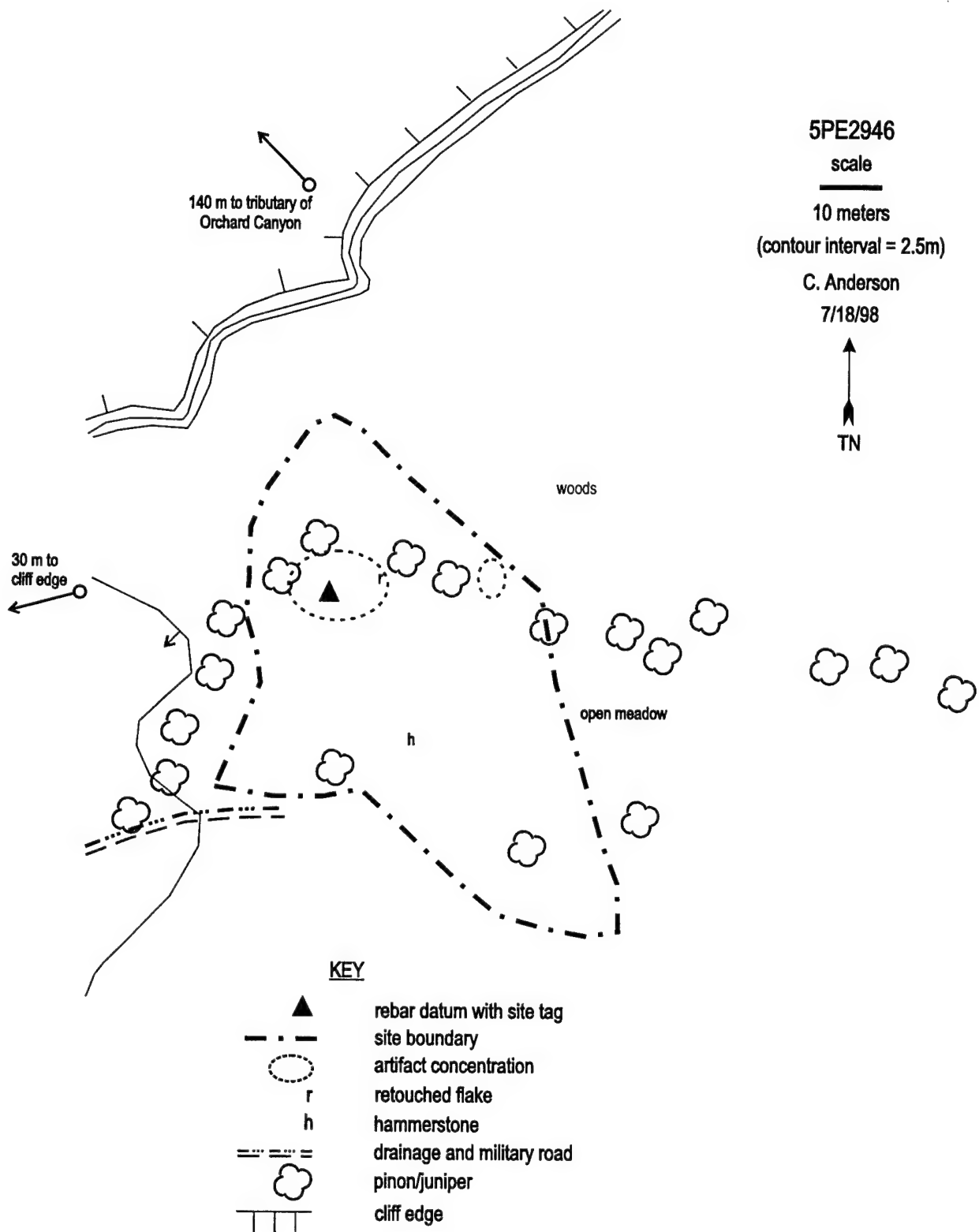


Figure III.59. Site Map, 5PE2946.

A total of forty-eight artifacts was recorded. The observed artifacts include one black chert hammerstone and one orthoquartzite retouched flake, which were collected. Forty-six flakes of various raw material types were analyzed (Table III.47). The lithic raw material types are locally available. The artifact assemblage suggests that both core reduction and tool manufacturing occurred at the site. The number of large and simple flakes indicate, however, that core reduction was the more prevalent activity. The very low percentage of cortex suggests that middle stages of reduction are reflected in the assemblage. The analysis of the assemblage in regard to Sullivan and Rosen (1985) differs from that of Ahler and Smail (1999) in that there is slightly more of an emphasis on tool manufacturing activities than core reduction activities. The site represents a locus of temporary occupation. The cultural affiliation and period are unknown because of the lack of temporally diagnostic artifacts.

Statement of Significance: The areas with the potential for buried deposits are disturbed enough to affect the integrity of any buried deposits. The site has little potential to yield further significant data. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2947

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5870 ft (1789 m) asl

Aspect: 255° Slope: 4°

Site Dimensions: 13 m NW/SE x 8 m NE/SW

This site consists of a sparse flaked-lithic artifact scatter on the western edge of a meadow along a northwest/southeast-trending mesa. The site is located along a gentle westerly slope below a low sandstone outcrop and above an ephemeral drainage (Figure III.60). Vegetation on the site is sparse and includes pinon, juniper, yucca, short prairie grasses, cholla, prickly pear cactus, and herbaceous shrubbery. Scattered pinon and juniper trees presently surround the site. Sandy sediments on the site are derived from residual weathering of the outcrop and are only 10 cm deep. Orthoquartzite occurs naturally in the area. There is moderate slope wash erosion and slight disturbance from military foot traffic.

A total of six artifacts was discovered, two tools and four flakes. The artifacts include one chert biface tip, one chert biface, and four flakes. The two bifaces were collected and the flakes were analyzed in the field (Table III.48). The small number of artifacts limits the inferences that can be drawn from the assemblage. The site represents a very limited occupation of unknown age and cultural affiliation. One nearby site, 5PE2949, has a similar artifact assemblage. These sites may indicate a specific use of the mesa such as seasonal hunting.

Statement of Significance: This site has very little potential for further information based on the shallow sediments, the amount of slope wash erosion, military disturbance, and the small number of artifacts. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2948

Site Type: Historical Homesteading/Agriculture Related Non-Habitation Site

Elevation: 5560 ft (1695 m) asl

Aspect: 140° Slope: 3-5°

Site Dimensions: 27 m N/S x 37 m E/W

This site is an artifact scatter on a small shale hilltop directly north of Fort Carson Road 12 (Figure III.61). Juniper trees in the area have been felled, and the logs are laying in the center of the site. The logs have been crushed by military vehicles. The hill is on the eastern end of a toe ridge on the west side of Pierce Gulch. Vegetation on the site includes pinon, juniper, prairie grasses, prickly pear cactus, yucca, and four o' clocks. The sediments consist of a thin silty loam

Table III.47. Flaked-lithic Debitage, 5PE2946.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"	2	3	14	3			1			23 (50%)
1/4"-1/2"	4			3	6					13 (28.3%)
<1/4"		1	2	4	3					10 (21.7%)
Total (%)	6 (13%)	4 (8.7%)	16 (38.8%)	10 (21.7%)	9 (19.6%)		1 (2.2%)			46 (100%)
Flake Type										
Shatter	1	1	4	3						9 (19.6%)
Simple	2	2	7	2	3		1			17 (37%)
Complex	2	1	2		5					10 (21.7%)
Bifacial Thinning	1		3	5	1					10 (21.7%)
Total (%)	6 (13%)	4 (8.7%)	16 (38.8%)	10 (21.7%)	9 (19.6%)		1 (2.2%)			46 (100%)
Cortex										
Present					2					2 (4.4%)
Absent	6	4	16	10	7		1			44 (95.6%)
Total (%)	6 (13%)	4 (8.7%)	16 (38.8%)	10 (21.7%)	9 (19.6%)		1 (2.2%)			46 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete	2	2	5	2						11 (23.9%)
Broken		1	2	2	1					6 (13%)
Flake Fragment	3	1	5	3	8		1			21 (45.7%)
Debris	1		4	3						8 (17.4%)
Total (%)	6 (13%)	4 (8.7%)	16 (38.8%)	10 (21.7%)	9 (19.6%)		1 (2.2%)			46 (100%)

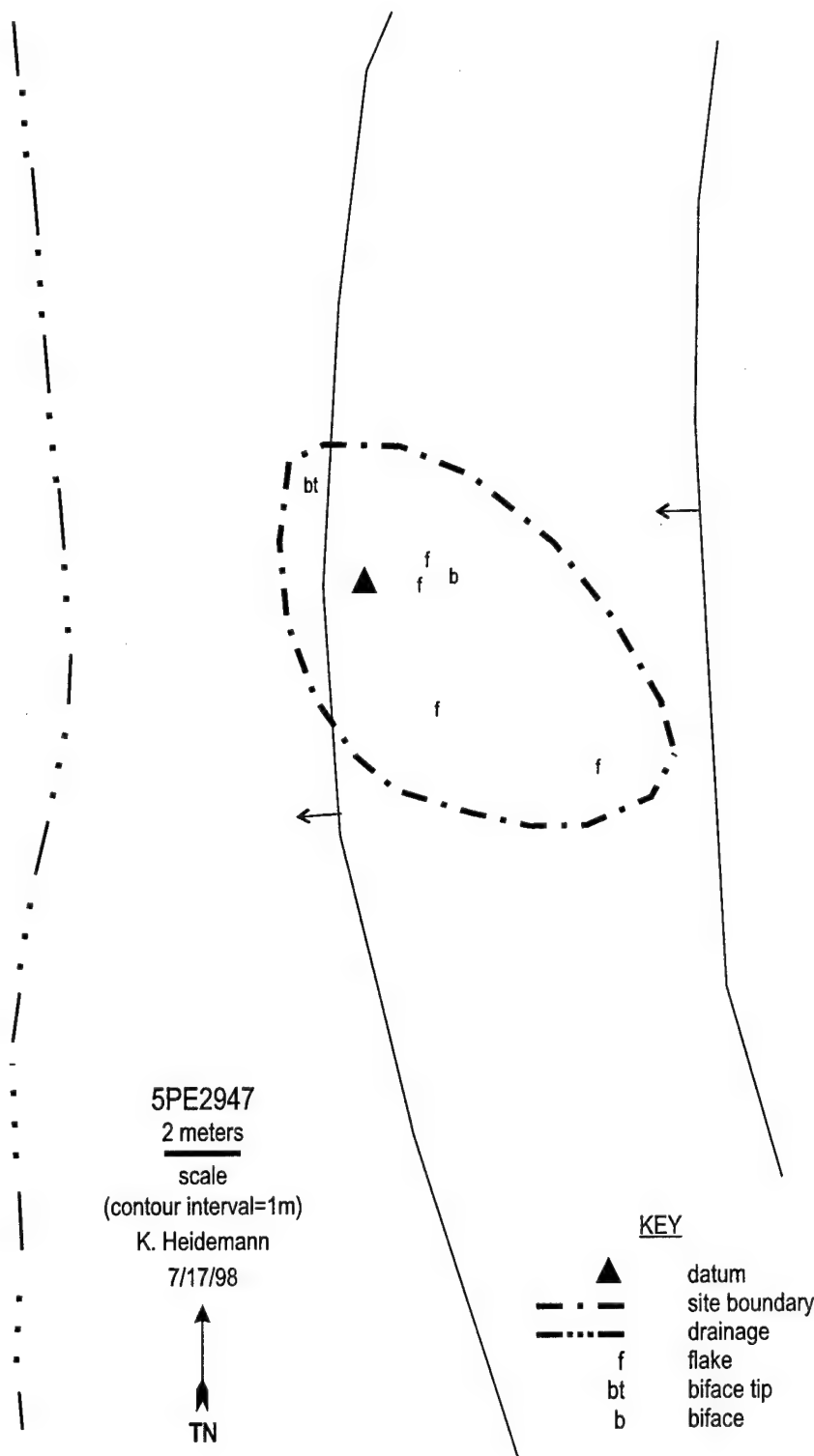


Figure III.60. Site Map, 5PE2947.

Table III.48. Flaked-lithic Debitage, 5PE2947.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			2	2						4 (100%)
1/4"-1/2"										
<1/4"										
Total (%)			2 (50%)	2 (50%)						4 (100%)
Flake Type										
Shatter			1	2						3 (75%)
Simple			1							1 (25%)
Complex										
Bifacial Thinning										
Total (%)			2 (50%)	2 (50%)						4 (100%)
Cortex										
Present										
Absent			2	2						4 (100%)
Total (%)			2 (50%)	2 (50%)						4 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			1							1 (25%)
Broken										
Flake Fragment										
Debris			1	2						3 (75%)
Total (%)			2 (50%)	2 (50%)						4 (100%)

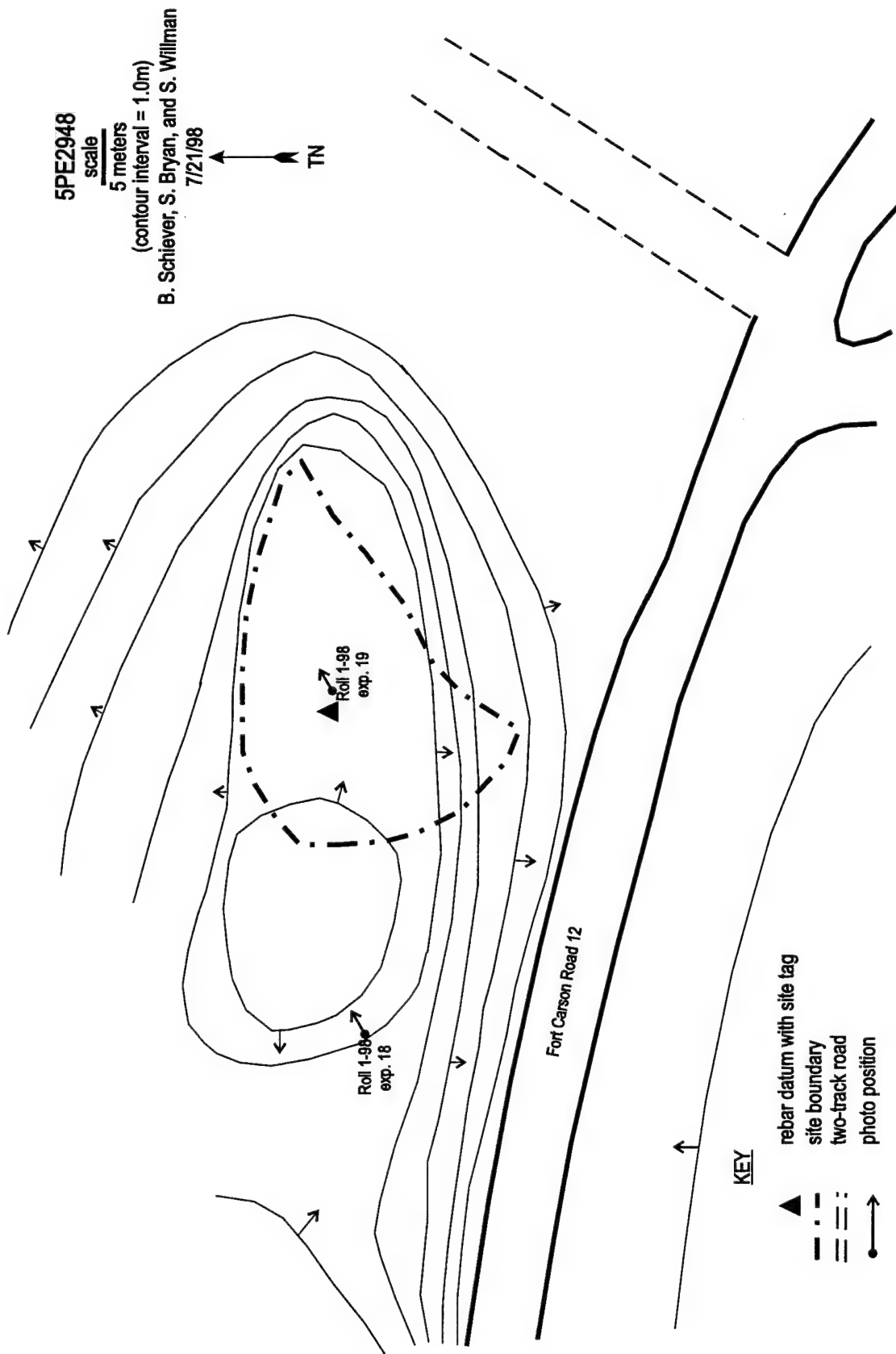


Figure III.61. Site Map, 5PE2948.

(<5 cm) with numerous limestone gravels. Items of military debris, including recent shell casings and c-ration cans, are mixed with the historic scatter. Military emplacements are located on the east end of the site and the majority of the shell casings are on the west end. Military tank tracks are present on the site and have destroyed much of the site's integrity.

Approximately two hundred glass, ceramic, and metal artifacts were examined. No features, other than recent military ones, were observed. Glass artifacts account for nearly 75 percent of all artifacts, and bottle glass alone accounts for over half of the artifacts. Various colors of bottle glass were noted and include aqua, amber, amethyst, clear, light green, and milk glass. Three bottle finishes (two crown and one wine) were identified and all were molded on an automatic bottle machine. No identifiable maker's marks were present. Other glass artifacts include a few pieces of light green window glass, several pieces of deep purple pressed glass, and one piece of clear pressed glass. Ceramic artifacts consist of twenty-six pieces of whiteware. One piece has a floral design. The metal artifacts include can fragments, one solder seal sanitary can, a few crown bottle caps, several wire nails, and one metal brace. The brace is in the shape of a cross and has an engraved decoration. No artifacts were collected.

The site represents a historic trash dump. No evidence of a habitation was observed. The artifacts at the site date no earlier than the 1930s, and some may date as late as the 1950s. The earliest patent date for the land was a homestead patent on August 23, 1920 by William W. Castles (Zier et al. 1987:Appendix E)

Statement of Significance: The site has little research potential based on the lack of features, the small number of diagnostic artifacts, the lack of significant soil deposition, and the amount of disturbance to the site. The documentation of the site has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2949

Site Type: Prehistoric Open Site Lacking Features

Elevation 5880 feet, 1792 m

Aspect: 158°

Slope: 6-8°

Site Dimensions: 33 m N/S x 52 m E/W

This site is a small flaked-lithic artifact scatter located at the far southern edge of a small meadow on the slight southeasterly slope of a northwest/southeast-trending mesa (Figure III.62). The artifacts are concentrated along a small arroyo that exhibits slope erosion. The vegetation is dominated by pinon, juniper, yucca, short prairie grasses, cholla, and prickly pear cactus. Open areas with the occasional tree surround the site. Natural outcrops of orthoquartzite occur in the immediate area. The sediments consist of a shallow (<10 cm) light brown sandy loam.

A total of seven artifacts were identified, including one large orthoquartzite biface (Figure 7.1a), one chert scraper/perforator, and five flakes. The tools were collected and the flakes were analyzed in the field (Table III.49). The small number of artifacts limits the inferences that can be drawn from the assemblage. The flakes consist of locally available raw materials. The site represents a limited prehistoric occupation of unknown age and cultural affiliation. One nearby site, 5PE2947, has a similar artifact assemblage. These sites may indicate a specific use of the mesa area such as seasonal hunting.

Statement of Significance: The site has little potential for buried deposits based on the shallow soil depth and the amount of erosion. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

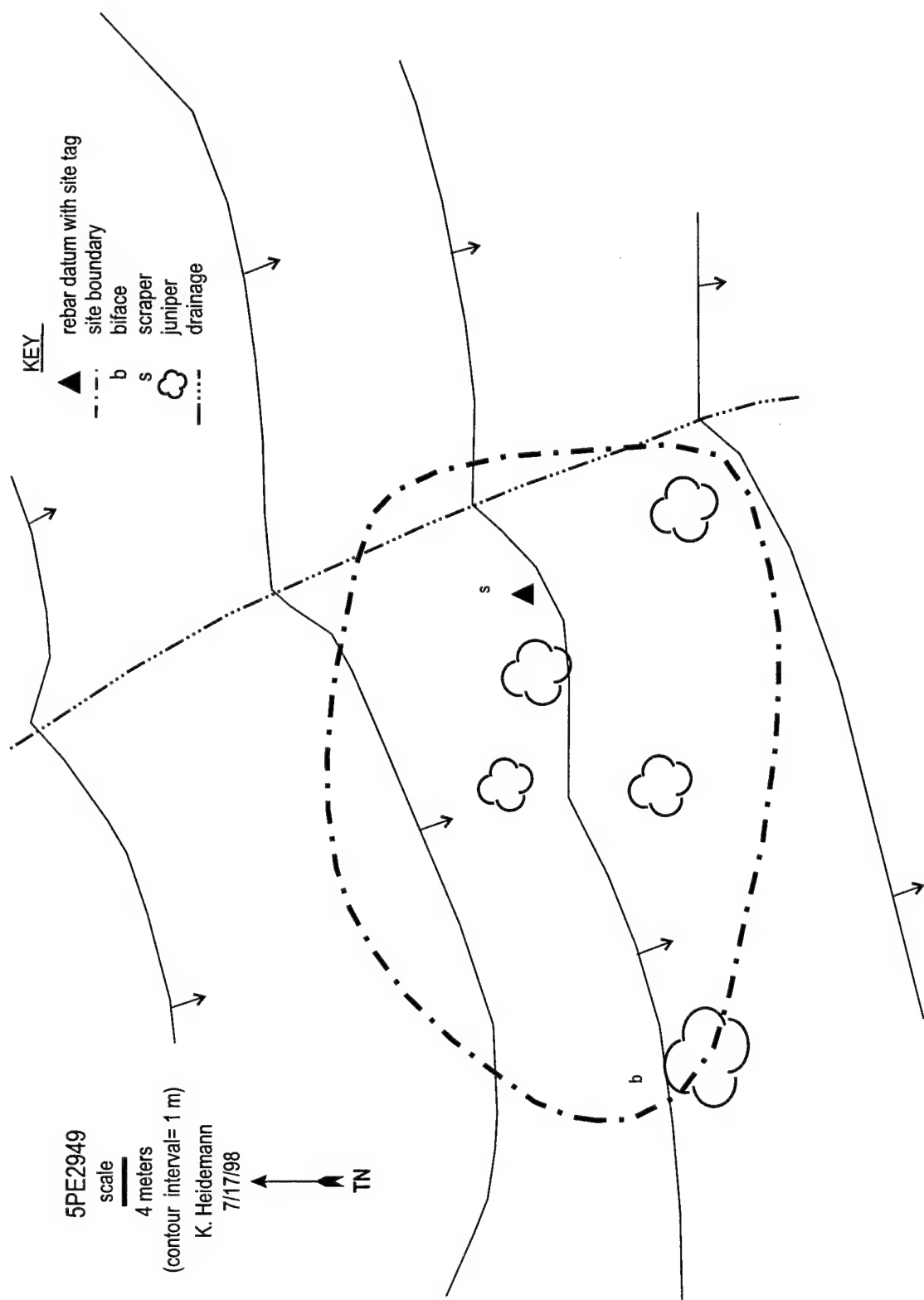


Figure III.62. Site Map, 5PE2949.

Table III.49. Flaked-lithic Debitage, 5PE2949.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			1	2			1			4 (80%)
1/4"-1/2"						1				1 (20%)
<1/4"										
Total (%)			1 (20%)	2 (40%)		1 (20%)	1 (20%)			5 (100%)
Flake Type										
Shatter			1	2		1	1			5 (100%)
Simple										
Complex										
Bifacial Thinning										
Total (%)			1 (20%)	2 (40%)		1 (20%)	1 (20%)			5 (100%)
Cortex										
Present										
Absent			1	2		1	1			5 (100%)
Total (%)			1 (20%)	2 (40%)		1 (20%)	1 (20%)			5 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete										
Broken										
Flake Fragment										
Debris			1	2		1	1			5 (100%)
Total (%)			1 (20%)	2 (40%)		1 (20%)	1 (20%)			5 (100%)

5PE2950

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5620 ft (1713 m) asl

Aspect: 182° Slope: 5°

Site Dimension: 28 m N/S x 21 m E/W

This site is a sparse flaked-lithic artifact scatter on a south-facing slope of sandstone bedrock that has pockets where sediments have accumulated. The site is on a gentle toe slope 30 m northwest of the main dirt road that parallels Pierce Gulch (Figure III.63). The area is open with a few scattered trees and little surface vegetation, which includes juniper, cholla, prickly pear cactus, short prairie grasses, and skunkbush. Exposed sandstone bedrock is common in the area and on the site. The sediments collected in the pockets are a light brown sand of varying depths but not exceeding 15 cm. Artifacts have been displaced through slope wash and bioturbation.

A total of eighteen artifacts was discovered. Artifacts include one orthoquartzite core, one chalcedony core fragment, and sixteen flakes. The flakes were analyzed in the field (Table III.50). Locally available lithic raw material types dominate the assemblage and suggest that the inhabitants were procuring raw material from the residual gravels present in the general site area. The number of artifacts limits the inferences that can be drawn from the flake assemblage, though it is likely that small amounts of both core reduction and tool manufacturing occurred in the site. The site represents a locus of limited prehistoric occupation with an undetermined cultural affiliation.

Statement of Significance: There is little potential for significant subsurface cultural deposits based on the amount of exposed bedrock on the site and the shallow depth of those areas with soil accumulation. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2951

Site Type: Historic Mining and Quarry Related Site

Elevation: 5630 ft (1716 m) asl

Aspect: Open Slope: 0-2°

Site Dimensions: 58 m N/S x 37 m E/W

This site consists of a historic artifact scatter with two mining-related features. It is located on a mesa 150 m east and 20 m above the main channel of Pierce Gulch. The site is located between Fort Carson Road 13 and a two-track road (Figure III.64). The mesa top is characterized by an open prairie grassland with sparse trees. The vegetation consists of short prairie grasses, prickly pear cactus, narrow leaf yucca, juniper, and pinon. The sediments consist of a grayish brown silty loam that is up to 20 cm deep. The features include the remnants of a sandstone foundation (Feature 1) and a mineshaft (Feature 2). The artifact scatter is concentrated mainly in the southern half of the site, near Feature 2. A two-track road, military vehicular tracks, and military maneuvers have damaged the integrity of the site.

Feature 1 is a rectangular foundation constructed of approximately twenty single-coursed sandstone blocks. A two-track road has crosscut the foundation from east to west. The feature measures 19' east/west x 12' 6" north/south. Feature 2 is a mineshaft entrance. Shaped sandstone blocks and natural sandstone occur in a circular fashion around the entrance. The mineshaft drops vertically for 8'. The feature measures 7' north/south x 5' 6" east/west. Two juniper timbers are aligned north/south across the shaft as roof supports and are stuck into the side of the shaft.

Approximately 130 glass, ceramic and metal artifacts were inventoried. Glass accounts for over half of all artifacts. Bottle glass, window glass, and milk glass were noted. Bottle glass includes clear and green pieces and one piece of deep purple glass. No bottle finishes or maker's marks were present. The ceramics are red and yellow earthenwares. Fragments from an insulator are present as well. Metal artifacts include one hole-in-cap can, two hole-in-top can fragments, miscellaneous can fragments, machine cut nails, and wire fence staples.

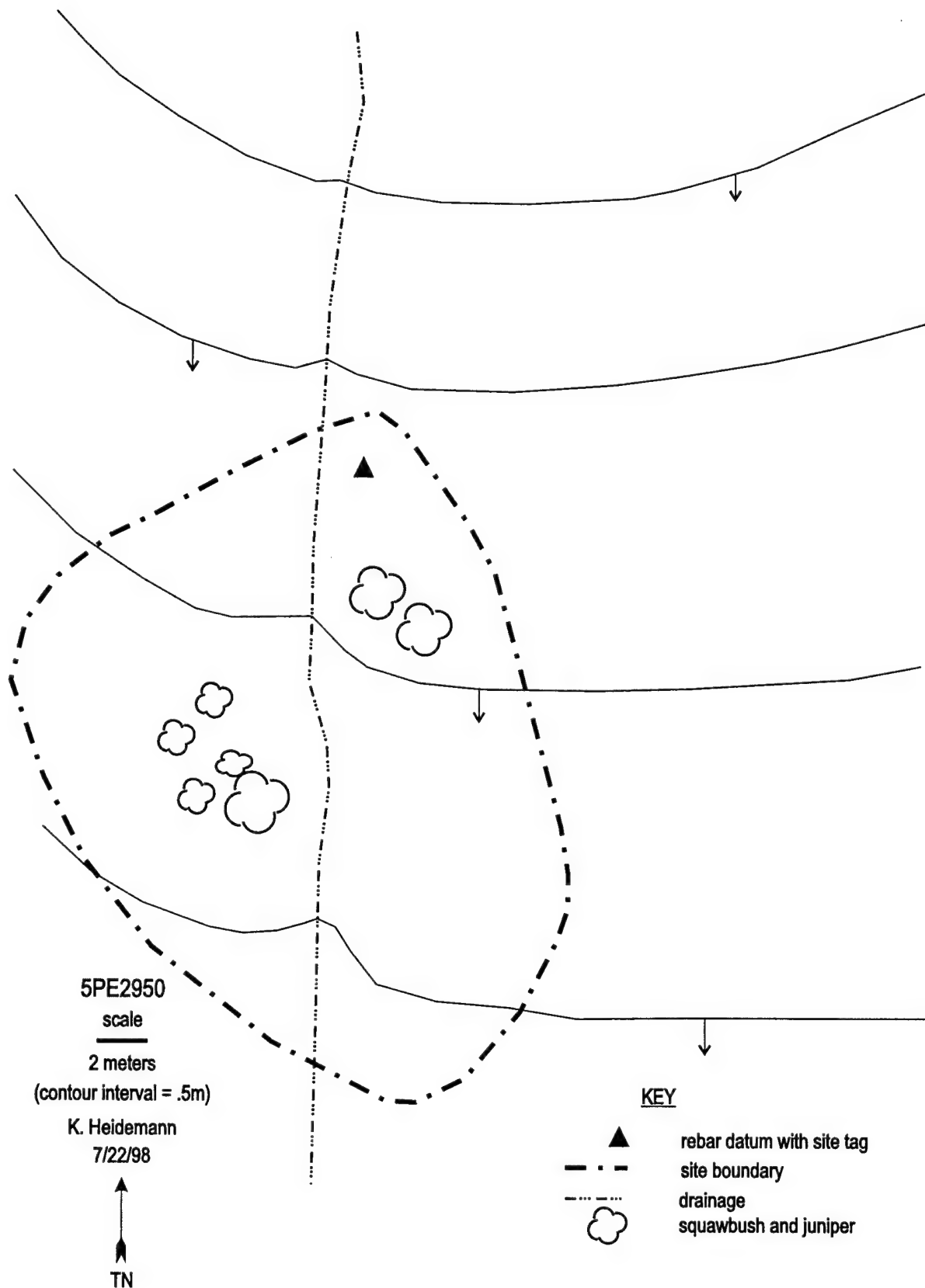


Figure III.63. Site Map, 5PE2950.

Table III.50. Flaked-lithic Debitage, 5PE2950.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		2	5	1		1		1		10 (62.5%)
1/4"-1/2"		1		3	1		1			6 (37.5%)
<1/4"										
Total (%)		3 (18.6%)	5 (31.3%)	4 (25%)	1 (6.3%)	1 (6.3%)	1 (6.3%)	1 (6.3%)		16 (100%)
Flake Type										
Shatter					1	1				2 (12.5%)
Simple		3	1	1			1			6 (37.5%)
Complex			4	3				1		8 (50%)
Bifacial Thinning										
Total (%)		3 (18.6%)	5 (31.3%)	4 (25%)	1 (6.3%)	1 (6.3%)	1 (6.3%)	1 (6.3%)		16 (100%)
Cortex										
Present		2	3	2	1	1		1		10 (62.5%)
Absent		1	2	2			1			6 (37.5%)
Total (%)		3 (18.6%)	5 (31.3%)	4 (25%)	1 (6.3%)	1 (6.3%)	1 (6.3%)	1 (6.3%)		16 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		2	4	4						10 (62.5%)
Broken		1	1					1		3 (18.6%)
Flake Fragment							1			1 (6.3%)
Debris					1	1				2 (12.5%)
Total (%)		3 (18.6%)	5 (31.3%)	4 (25%)	1 (6.3%)	1 (6.3%)	1 (6.3%)	1 (6.3%)		16 (100%)

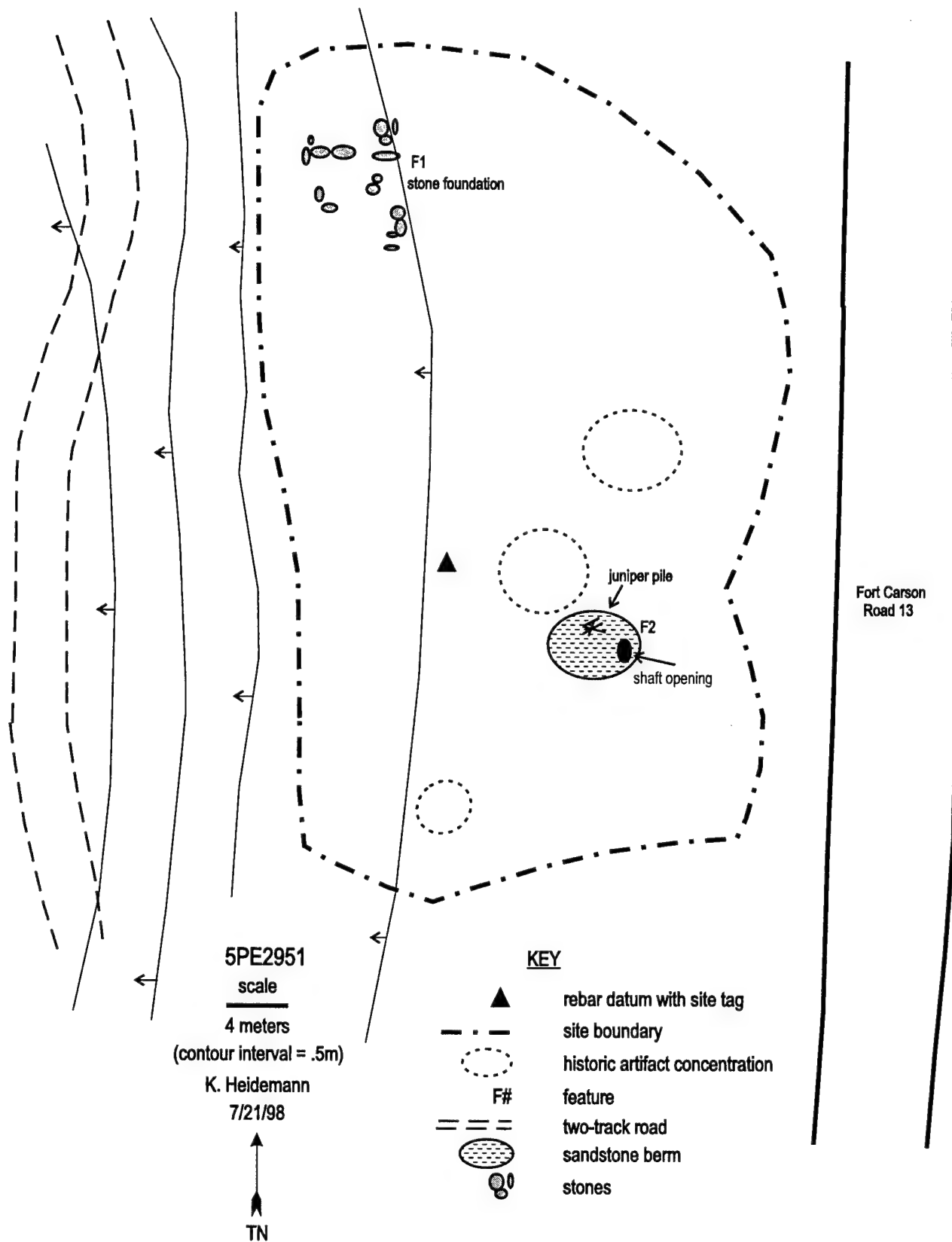


Figure III.64. Site Map, 5PE2951.

The site represents the remains of a short-term mining camp. Feature 1 most likely represents the remains of a temporary shelter and Feature 2 is an adit. The quantity of artifacts suggests that the area was occupied temporarily. No trash dumps were located in the area. Diagnostic artifacts are at a minimum, and the few artifacts date the site from possibly as early as the late 1800s to as late as the 1950s. Because the original homestead patent by Wilson W. Castles dates to August 23, 1920 (Zier et al. 1987: Appendix D), it is suggested that the site probably dates from the 1920s to the 1950s.

Statement of Significance: The site has limited research potential because of the military impacts, the low potential for significant buried deposits, and the overall type and condition of the remains. The artifact scatter is light, and the remains of the mineshaft and foundation are in ruins. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work is recommended, but a complete historic literature search should be done. For safety reasons, the mineshaft should be backfilled or fenced.

5PE2952

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5820 ft (1774 m) asl

Aspect: 220° Slope: 1°

Site Dimensions: 17 m NW/SE x 4 m NE/SW

This site is a sparse flaked-lithic artifact scatter located on the eastern margin of the floodplain approximately 300 m east of Red Creek (Figure III.65). The site is on a branch of the floodplain that extends north between two small ridges that slope southward. The site is just north of a two-track road that has been heavily disturbed by military vehicular traffic. The site is in an open grassland setting that has only a slightly discernable slope. The vegetation consists mostly of bunch grasses with some alfalfa and sunflowers. The sediments consist of a brown silt that is 15 cm in depth. Off-road vehicular traffic has visibly impacted the site.

A total of five flaked-lithic artifacts was identified (Table III.51). A number of possible chert shatter were also noted but are believed to be naturally occurring. The small number of artifacts limits the inferences that can be drawn from the assemblage. The site represents a locus of limited prehistoric occupation of undetermined age and cultural affiliation.

Statement of Significance: The site has little potential for significant intact subsurface deposits due to vehicular disturbance and the shallow soil depth. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2953

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5810 ft (1771 m) asl

Aspect: 225° Slope: 4°

Site Dimensions: 34 m N/S x 40 m E/W

This site is a sparse flaked-lithic artifact scatter located on a small north/south-trending ridge between a two-track road and an unnamed tributary of Booth Gulch (Figure III.66). The ridge is on the southwestern slope of Booth Mountain and slopes gently east to west. The on-site vegetation consists of pinon, juniper, bunch grasses, yucca, prickly pear cactus, scrub oak, and cholla. Bedrock is exposed over a large portion of the site, and the sediments present consist of a shallow (5cm), tan sandy silt with numerous gravels. Light military disturbance associated with the two-track road is present.

A total of nineteen flakes was recorded (Table III.52). The small number of artifacts limits the inferences that can be drawn from the site. Local lithic raw materials were utilized. The assemblage suggests that a limited amount of core reduction and tool manufacturing took place at this locus during a temporary prehistoric occupation of undetermined age and cultural affiliation.

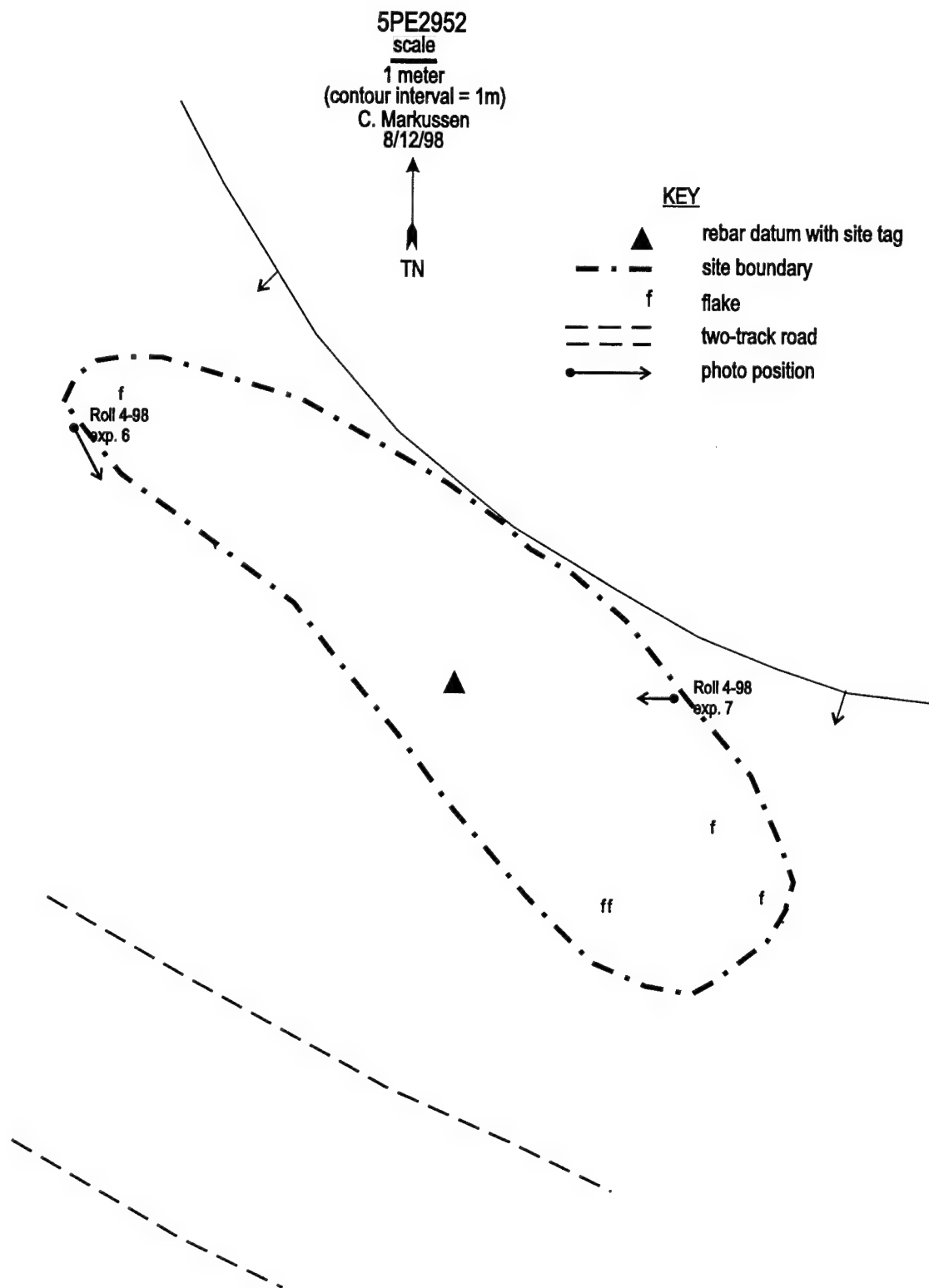


Figure III.65. Site Map, 5PE2952.

Table III.51. Flaked-lithic Debitage, 5PE2952.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"				2						2 (40%)
1/4"-1/2"				2						2 (40%)
<1/4"			1							1 (20%)
Total (%)			1 (20%)	4 (80%)						5 (100%)
Flake Type										
Shatter				1						1 (20%)
Simple				2						2 (40%)
Complex			1	1						2 (40%)
Bifacial Thinning										
Total (%)			1 (20%)	4 (80%)						5 (100%)
Cortex										
Present				2						2 (40%)
Absent			1	2						3 (60%)
Total (%)			1 (20%)	4 (80%)						5 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete				2						2 (40%)
Broken				1						1 (20%)
Flake Fragment			1							1 (20%)
Debris				1						1 (20%)
Total (%)			1 (20%)	4 (80%)						5 (100%)

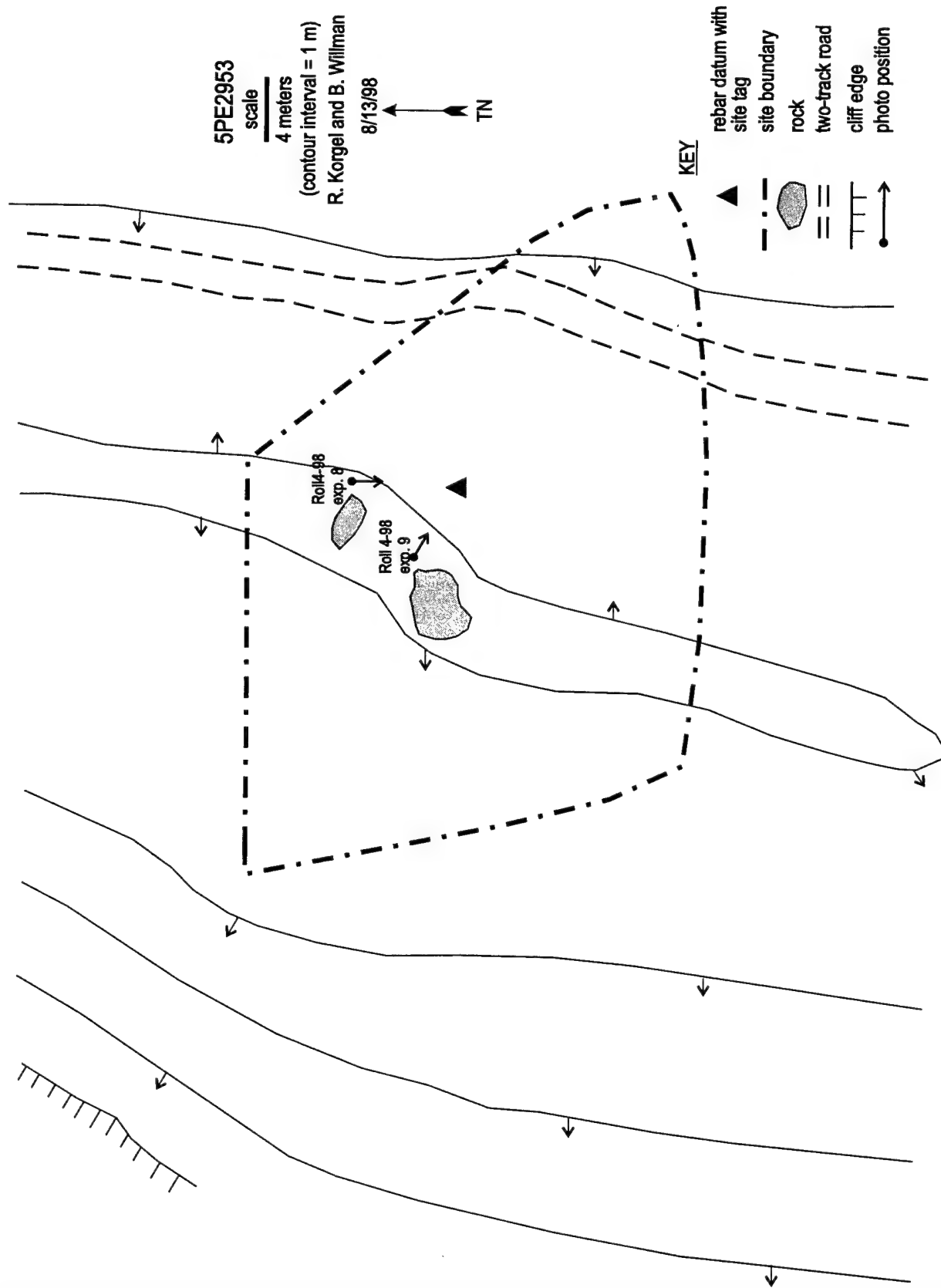


Figure III.66. Site Map, 5PE2953.

Table III.52. Flaked-lithic Debitage, 5PE2953.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		3	3	8						14 (73.7%)
1/4"-1/2"				2			1			3 (15.8%)
<1/4"				2						2 (10.5%)
Total (%)		3 (15.8%)	3 (15.8%)	12 (63.2%)			1 (5.3%)			19 (100%)
Flake Type										
Shatter			1	4						5 (26.3%)
Simple		3	2	8			1			14 (73.3%)
Complex										
Bifacial Thinning										
Total (%)		3 (15.8%)	3 (15.8%)	12 (63.2%)			1 (5.3%)			19 (100%)
Cortex										
Present			1	2						3 (15.8%)
Absent		3	2	10			1			16 (84.2%)
Total (%)		3 (15.8%)	3 (15.8%)	12 (63.2%)			1 (5.3%)			19 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		2	1	2						5 (26.3%)
Broken		1	1							2 (10.5%)
Flake Fragment				6			1			7 (36.8%)
Debris			1	4						5 (26.3%)
Total (%)		3 (15.8%)	3 (15.8%)	12 (63.2%)			1 (5.3%)			19 (100%)

Statement of Significance: Because the sediments are shallow and bedrock is exposed over much of the site, there is little potential for significant intact buried deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2954

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5770' ft (1759 m) asl

Aspect: 180° Slope: 3°

Site Dimensions: 38 m E/W x 50 m N/S

This site is on a north/south-trending ridge between two drainages on the southwestern slope of Booth Mountain. The surface of the site slopes slightly to the southeast, and a military road parallels the east edge of the site (Figure III.67). Vegetation includes pinon, juniper, bunch grasses, serviceberry, cholla, prickly pear cactus, and scrub oak. Sandstone bedrock is exposed, and there are pockets of sediment accumulations between the bedrock exposures. The fill in these pockets varies in depth, but does not exceed 15 cm. Sediments are a sandy silt with gravels. The site is slightly impacted by military maneuvers.

A total of twenty-seven artifacts was identified, including twenty-two flakes, two quartzite hammerstones, one chert biface fragment, one orthoquartzite spokeshave, and one sandstone slab metate. The hammerstones and the biface fragments were collected. The flakes were analyzed in the field (Table III.53). The artifact assemblage is diverse, although small in numbers. Several activities can be inferred from the artifact assemblage. The metate suggests food processing, while the hammerstones and flakes suggest core reduction and tool manufacturing of local raw materials. The site represents a prehistoric occupation of undetermined age and cultural affiliation.

Statement of Significance: The sediments, although shallow, have the potential to yield intact subsurface deposits. The lack of disturbance, the relatively stable nature of the surface, the potential for intact deposits, and variety of artifacts indicate that this site is potentially eligible for nomination to the NRHP. The site has the potential to yield important information on the research themes of settlement patterns, prehistoric economies, and chronology and cultural relationships as defined in the CRMP (Zier et al. 1997).

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggests a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5PE2955

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5830 ft (1777 m) asl

Aspect: 180° Slope: 1°

Site Dimensions: 14 m E/W x 31 m N/S

This site is a sparse flaked-lithic artifact scatter located on an open grassy bench on the west side of a north/south-trending ridge along the southwestern slope of Booth Mountain (Figure III.68). A two-track military road crosses the west edge of the site. A tributary of Booth Gulch is 40 m to the west. Vegetation consists of pinon, juniper, scrub oak, bunch grass, prickly pear cactus, and cholla. The shallow (10 cm) sediments on the site are a sandy silt with gravels, and sandstone bedrock is exposed on the surface as well. The site has moderate disturbance from military vehicular traffic associated with the two-track road.

A total of nine flakes was identified (Table III.54). Locally available lithic raw material types were used. The small number of artifacts limits the inferences that can be drawn from the site. The site represents a locus of limited prehistoric occupation of undetermined age and cultural affiliation.

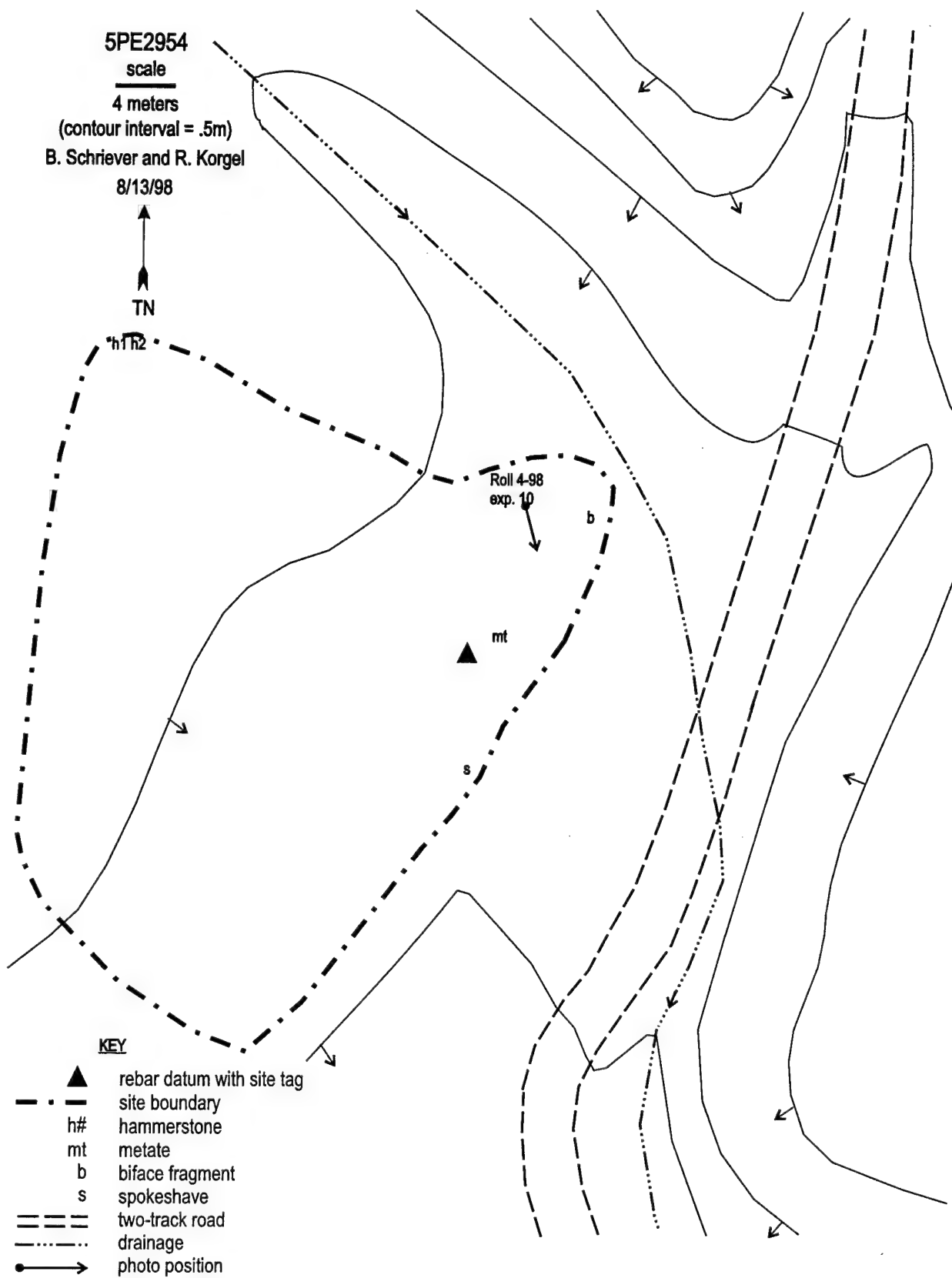


Figure III.67. Site Map, 5PE2954

Table III.53. Flaked-lithic Debitage, 5PE2954.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		9	1	7						17 (77.3%)
1/4"-1/2"				5						5 (22.7%)
<1/4"										
Total (%)		9 (40.9%)	1 (4.6%)	12 (54.6%)						22 (100%)
Flake Type										
Shatter		2	1	2						5 (22.7%)
Simple		5		4						9 (40.9%)
Complex		2		6						8 (36.4%)
Bifacial Thinning										
Total (%)		9 (40.9%)	1 (4.6%)	12 (54.6%)						22 (100%)
Cortex										
Present		2		2						4 (18.2%)
Absent		7	1	10						18 (81.8%)
Total (%)		9 (40.9%)	1 (4.6%)	12 (54.6%)						22 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		4		4						8 (36.4%)
Broken		3		3						6 (27.3%)
Flake Fragment		2		3						5 (22.7%)
Debris			1	2						3 (13.6%)
Total (%)		9 (40.9%)	1 (4.6%)	12 (54.6%)						22 (100%)

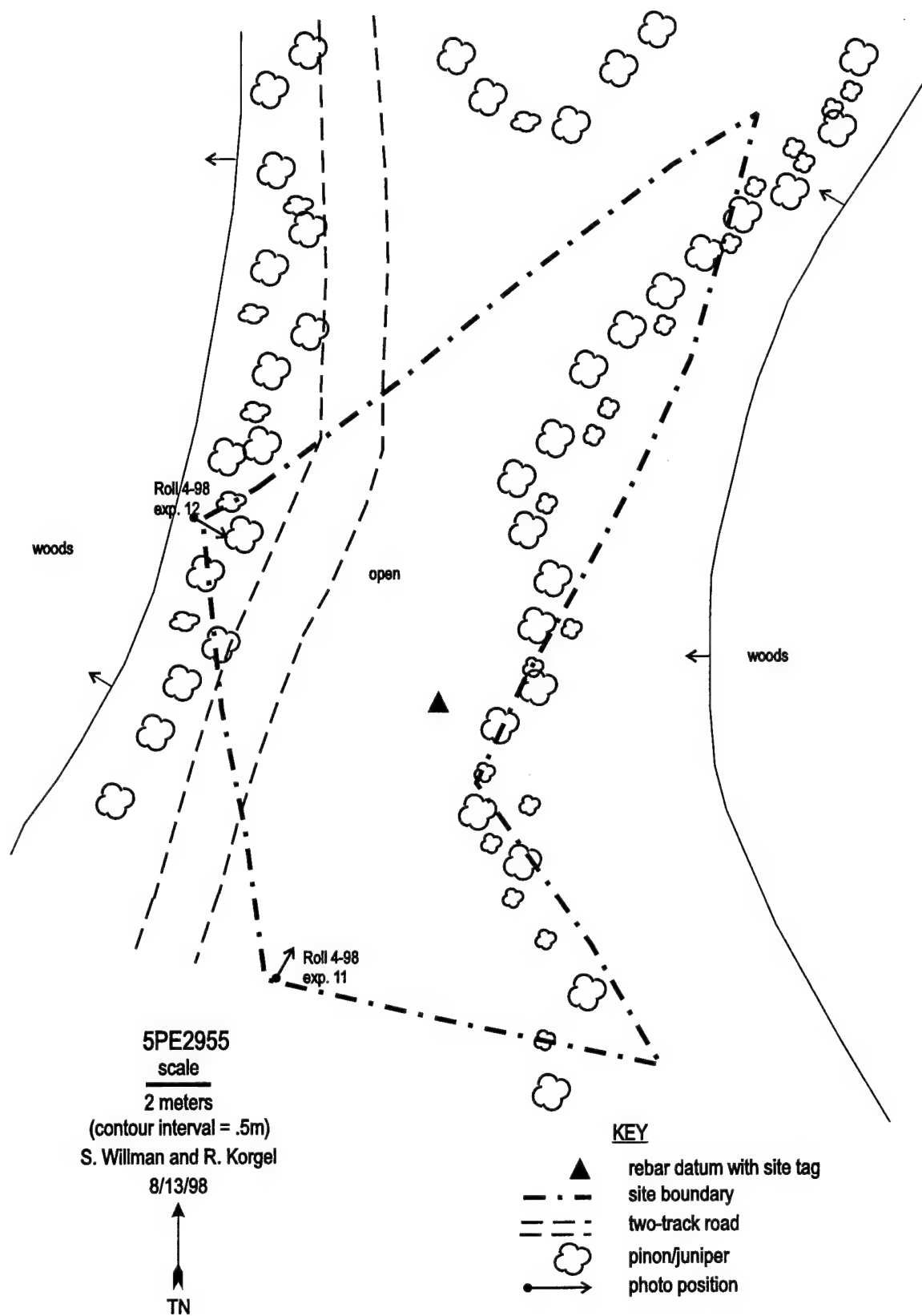


Figure III.68. Site Map, 5PE2955.

Table III.54. Flaked-lithic Debitage, 5PE2955.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		4		1						5 (55.6%)
1/4"-1/2"				3						3 (33.3%)
<1/4"				1						1 (11.1%)
Total (%)		4 (44.4%)		5 (55.6%)						9 (100%)
Flake Type										
Shatter				4						4 (44.4%)
Simple		2								2 (22.2%)
Complex		2								2 (22.2%)
Bifacial Thinning				1						1 (11.1%)
Total (%)		4 (44.4%)		5 (55.6%)						9 (100%)
Cortex										
Present				1						1 (11.1%)
Absent		4		4						8 (88.9%)
Total (%)		4 (44.4%)		5 (55.6%)						9 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		2								2 (22.2%)
Broken		2								2 (22.2%)
Flake Fragment				1						1 (11.1%)
Debris				4						4 (44.4%)
Total (%)		4 (44.4%)		5 (55.6%)						9 (100%)

Statement of Significance: The site has little potential to yield intact subsurface deposits due to the paucity of artifacts, the amount of site disturbance, and the shallow sediments. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2956

Site Types: Prehistoric Open Site Lacking Features/Historical Transportation Network Site

Elevation: 5890-5970 ft (1795-1820 m) asl

Aspect: 270° Slope: 1-5°

Site Dimensions: 33 m N/S x 20 m E/W (Prehistoric Component)/405 m N/S x 2 m E/W (Historic Road)

This site represents a multiple-component site located on the western slope of Booth Mountain overlooking Booth Gulch. Both a prehistoric and a historic component are identified. The prehistoric component is located on a very small bench on the slope (Figure III.69) and consists of a flaked-lithic and ground stone artifact scatter. The prehistoric artifacts are concentrated within the shallow slope wash drainages that bisect the site in a westerly direction. The sediments consist of a very gravelly sandy loam that is only about 20 cm deep. The vegetation is dominated by scrub oak, pinon, juniper, grasses, and prickly pear cactus. The historic component consists of a historic road that at one point passes through the prehistoric artifact scatter (Figures III.69 and III.70). The road crosses the bench and parallels the ridge slope. Stacked sandstone was found along the western edge of the road in two separate places. The sandstone was apparently removed to clear the road. A few axe-cut trees were also observed in several places. The north end of the road could not be followed further than an intermittent drainage. The south end terminates in a small meadow on the slope of Booth Mountain. The site, particularly the prehistoric component, has been impacted by slope erosion. A small amount of military trash was also noted on both components, but this impact was minimal.

A total of 160 prehistoric artifacts was recorded. The prehistoric artifacts include one sandstone mano, one sandstone slab metate, as five chert bifaces, one chalcedony biface, one orthoquartzite biface, one quartzite retouched blade, one orthoquartzite chopper/core, and one hundred forty-nine flakes. The bifaces, the blade and the chopper were collected. One of the bifaces is illustrated in Figure 7.1b. The ground stone artifacts and the flakes were analyzed in the field. The results of the flake analysis are presented in Tables III.55 and III.56.

Orthoquartzite and quartzite artifacts account for seventy-nine per cent of all observed flakes. The number of large flakes and the higher percentage of simple flakes are indicative of early stages of core reduction, while the presence of a number of complex flakes and the high number of flakes without cortex may suggest that middle stages of reduction are also present (Ahler and Smail 1999). Core reduction activities at the site were not restricted to the preparation of cores, but include the further reduction of materials for later use or in the preparation of tools. The slightly higher percentage of orthoquartzite with cortex could result from the larger, tabular form of the material as opposed to materials that occur as cobbles and have more surface area of cortex. The flake assemblage was also broken down by size grade to examine the variables of material type and flake type (Table III.56). Simple flakes are the most common flake type in all three size grades and represent just over forty-three percent of all analyzed flakes. Chert is the only raw material type represented that has an overall higher percentage of complex flakes, suggesting that chert and, to a lesser extent, chalcedony were most likely brought to the site in a reduced form, as opposed to orthoquartzite and quartzite, which were primarily reduced at the site. The Sullivan and Rosen (1985) system of classifying the flake assemblage suggests that core reduction was the primary lithic- manufacturing activity at the site. Complete flakes are more indicative of initial stages of core reduction, whereas debris can represent the remains of more intensive core reduction. Broken flakes and flake fragments account for just over thirty percent of the assemblage and suggest other activities such as tool manufacture. The groundstone indicates that plant and/or animal processing was an activity that occurred here as well. The prehistoric component represents a locus of prehistoric occupation of undetermined age and cultural affiliation.

The historic component consists of a historic road that provided access to portions of Booth Mountain. No historic artifacts were associated with the road. The road may be related to ranching or perhaps wood-cutting activities. The age of the road is undetermined. The narrow width of the road (too narrow for modern vehicles) and the associated presence of the axe-cut trees along it suggest that the road has some antiquity. The road most likely dates to the 1920s-1950s.

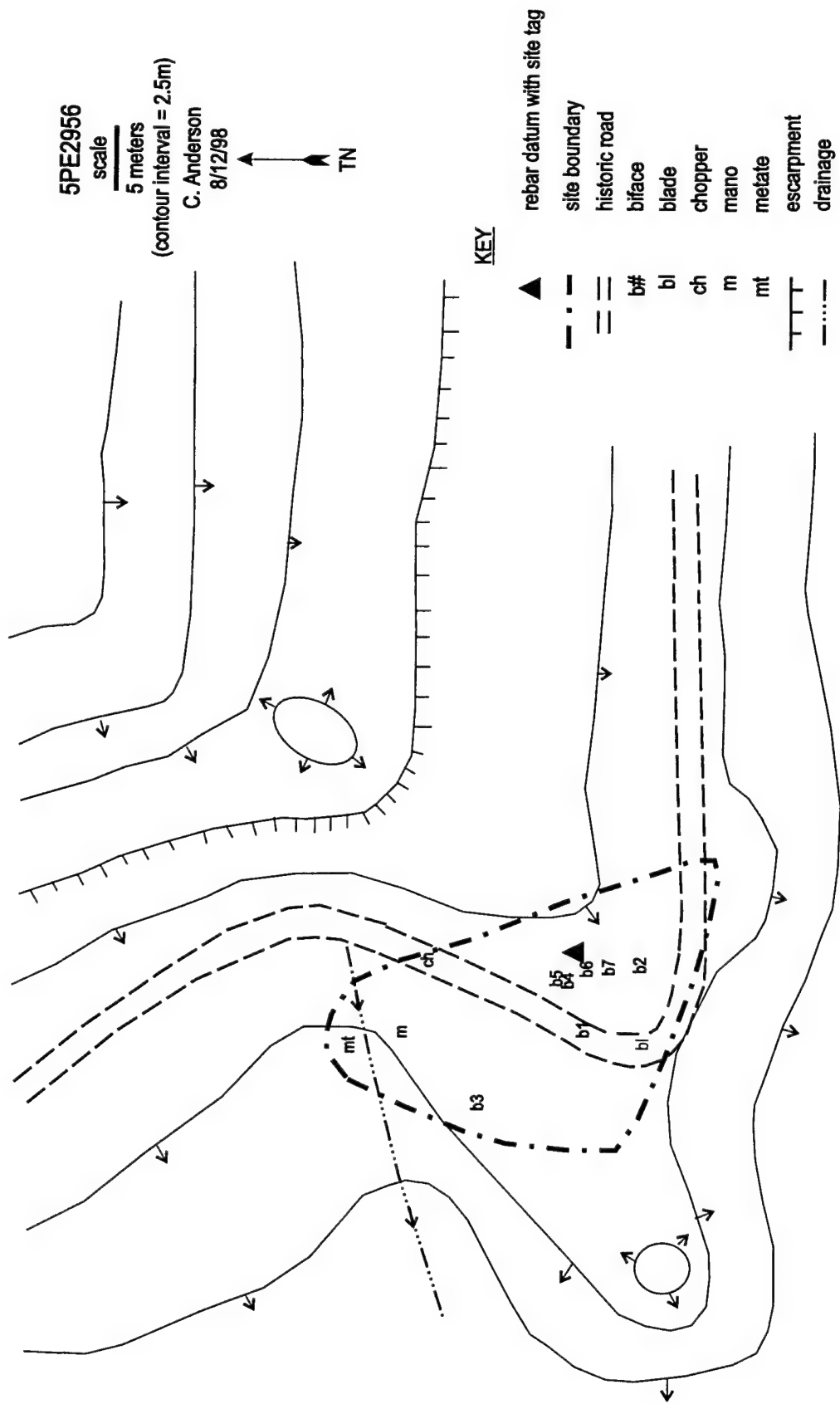
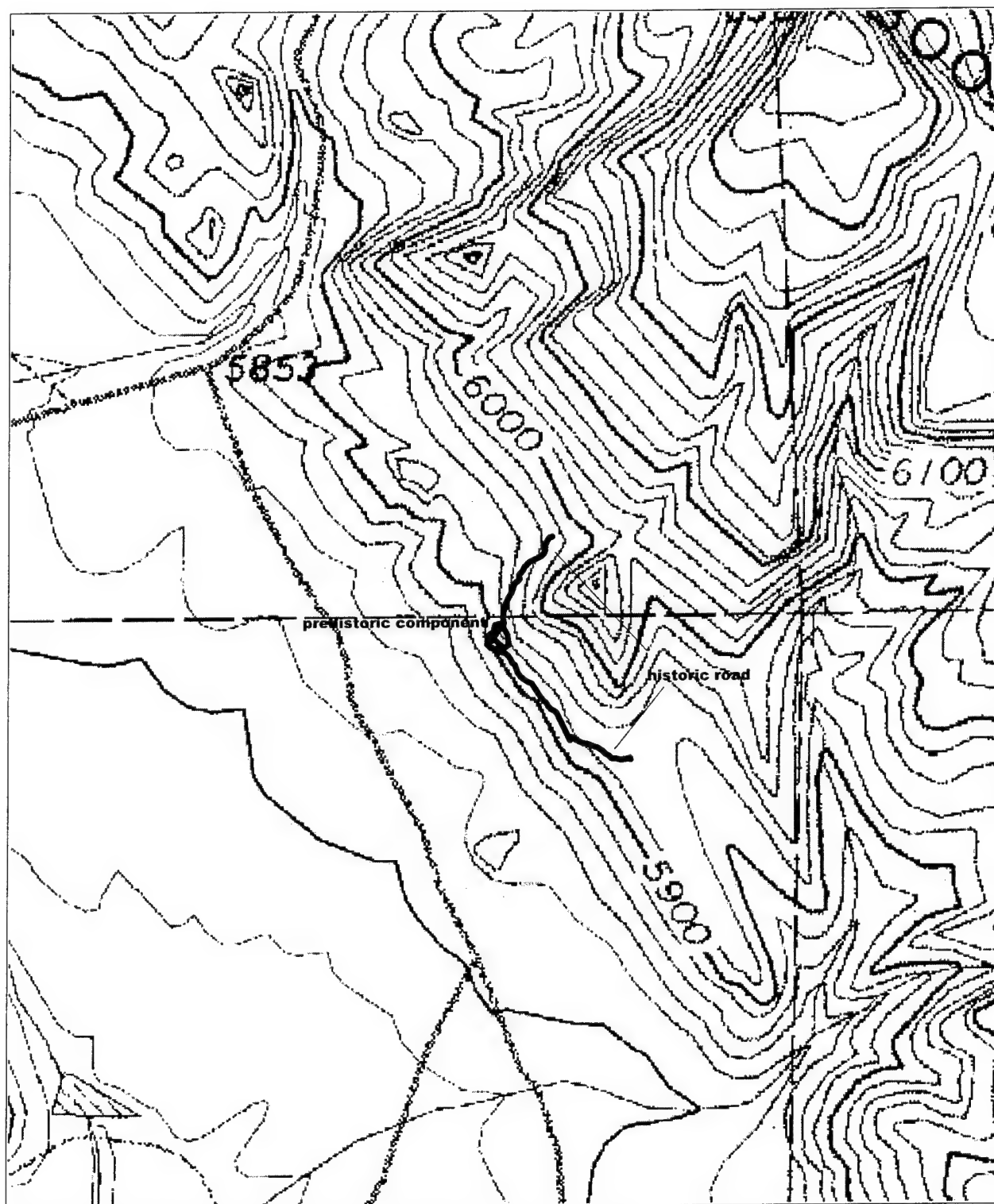


Figure III.69. Site Map, Prehistoric Component, 5PE2956.



5PE2956

Pierce Gulch 7.5' Quadrangle



40 0 40 80 Meters



Figure III.70. Site Map, Historic Component, 5PE2956.

Table III.55. Flaked-lithic Debitage, 5PE2956.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		61	32	9	1					103 (69.1%)
1/4"-1/2"		6	16	13	2		2			39 (26.2%)
<1/4"		1	2	2	2					7 (4.7%)
Total (%)		68 (45.6%)	50 (33.6%)	24 (16.1%)	5 (3.4%)		2 (1.3%)			149 (100%)
Flake Type										
Shatter		15	10	4						29 (19.5%)
Simple		26	26	7	4		2			65 (43.6%)
Complex		27	14	13	1					55 (36.9%)
Bifacial Thinning										
Total (%)		68 (45.6%)	50 (33.6%)	24 (16.1%)	5 (3.4%)		2 (1.3%)			149 (100%)
Cortex										
Present		43	21	14						78 (52.3%)
Absent		25	29	10	5		2			71 (47.7%)
Total (%)		68 (45.6%)	50 (33.6%)	24 (16.1%)	5 (3.4%)		2 (1.3%)			149 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		34	23	13	2		1			73 (49%)
Broken		12	12	5	2					31 (20.8%)
Flake Fragment		7	5	2	1		1			16 (10.7%)
Debris		15	10	4						29 (19.5%)
Total (%)		68 (45.6%)	50 (33.6%)	24 (16.1%)	5 (3.4%)		2 (1.3%)			149 (100%)

Table III.56. Flaked-lithic Debitage by Size Grade, 5PE2956.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	2 (22.2%)	2 (22.2%)	5 (55.6%)		9 (8.7%)
Orthoquartzite	6 (18.8%)	17 (53.1%)	9 (28.1%)		32 (31.1%)
Chalcedony		1 (100%)			1 (1%)
Quartzite	14 (23%)	22 (36.1%)	25 (41%)		61 (59.2%)
Quartz					
Silicified Wood					
Other					
Total	22 (21.4%)	42 (40.8%)	39 (37.9%)		103 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	2 (15.4%)	3 (23.1%)	8 (61.5%)		13 (13.3%)
Orthoquartzite	4 (25%)	8 (50%)	4 (25%)		16 (41%)
Chalcedony		2 (100%)			2 (5.1%)
Quartzite	1 (16.7%)	3 (50%)	2 (33.3%)		6 (15.4%)
Quartz		2 (100%)			2 (5.1%)
Silicified Wood					
Other					
Total	7 (18%)	18 (46.2%)	14 (35.9%)		39 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert		2 (100%)			2 (28.6%)
Orthoquartzite		1 (50%)	1 (50%)		2 (28.6%)
Chalcedony		1 (50%)	1 (50%)		2 (28.6%)
Quartzite		1 (100%)			1 (14.3%)
Quartz					
Silicified Wood					
Other					
Total		5 (71.4%)	2 (28.6%)		7 (100%)

Statement of Significance: The gravelly and shallow sediments in the prehistoric component have little potential to yield intact subsurface deposits. The site is probably limited to the surface exposure of artifacts. Documentation of the historic road and the prehistoric component has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2957

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5990 ft (1826 m) asl

Aspect: 234° Slope: 0-8°

Site Dimensions: 25 m E/W x 20 m N/S

This site consists of a light scatter of flaked-lithic artifacts located on a low saddle of a ridge on the west slope of Booth Mountain (Figure III.71). The ridge below the saddle slopes to the west and to the east. The artifacts are exposed on the saddle in an open grassy area with yucca, prickly pear cactus, pinon, juniper, and cholla. Chert gravels, sandstone, and orthoquartzite occur in the colluvial residuum exposed on the surface. There are numerous angular pieces of debris, but the debris does not exhibit flake characteristics and occurs naturally. The sediments consist of a shallow (10cm), gravelly silty sand. Slight erosion from slope wash has affected the site.

A total of thirty-five artifacts was identified. A thin, patterned-chert biface fragment and a chert core fragment were noted. The biface was collected. Thirty-three flakes were analyzed in the field (Table III.57). Local lithic raw materials were utilized. The combination of flakes, a core and a biface suggest that limited amounts of core reduction and tool manufacturing occurred at the site. This is based on the relative parity between flake types that could be indicative of an emphasis on one activity over another. The site represents a locus of temporary prehistoric occupation of undetermined age and cultural affiliation.

Statement of Significance: The lack of significant soil deposition and the small number of artifacts indicate that the site has little potential for further information. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2958

Site Type: Prehistoric Sheltered Site

Elevation: 6190 ft (1887 m) asl

Aspect: 134° Slope: 10°

Site Dimensions: 7 m N/S x 7 m E/W

This site consists of a rock shelter and an associated artifact scatter on the east side of a ridge on the interior of Booth Mountain. The shelter is located at the base of a vertical sandstone escarpment overlooking an intermittent tributary of Booth Gulch to the east (Figure III.72). Vegetation in front of the shelter includes juniper, pinon, mountain mahogany, grasses, cholla, prickly pear cactus, and claret-cup cactus. Sediments within the shelter are a sandy residuum. Military disturbance is obvious with piled branches in the interior, and the metates have been stacked with natural pieces of sandstone creating a small wall. In addition to military impacts, the slope in front of the shelter is subject to erosion. A trowel test near the back of the shelter indicates that at least 50 cm of soil deposition is present. One orthoquartzite flake was recovered at 48 cm, and charcoal begins at 45 cm and continues to 50 cm. The interior of the shelter measures 7 m x 3.5 m. Two small, vertically incised grooves were also noted in the back of the cave. The parallel grooves are 10 cm long and 2 cm wide. The grooves are 20 cm apart and are 32 cm above the current floor of the shelter.

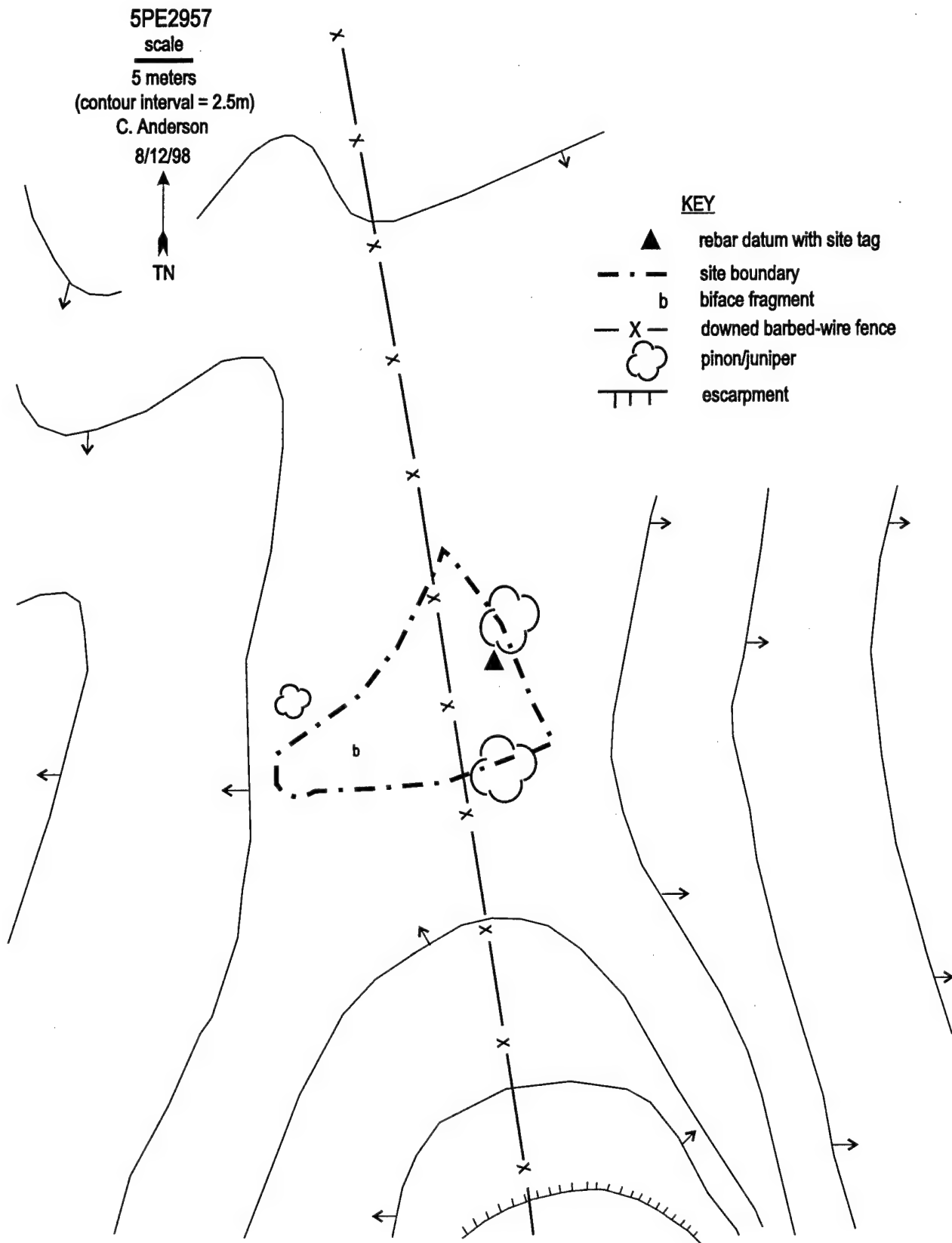


Figure III.71. Site Map, 5PE2957.

Table III.57. Flaked-lithic Debitage, 5PE2957.

Material Type								Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone
Size								
>1/2"		1	16	1			1	19 (57.6%)
1/4"-1/2"			6	4			1	11 (33.3%)
<1/4"			1	1	1			3 (9.1%)
Total (%)		1 (3%)	23 (69.7%)	6 (18.2%)	1 (3%)		2 (6.1%)	33 (100%)
Flake Type								
Shatter								
Simple		1	14	2			1	18 (54.6%)
Complex			9	4	1		1	15 (45.5%)
Bifacial Thinning								
Total (%)		1 (3%)	23 (69.7%)	6 (18.2%)	1 (3%)		2 (6.1%)	33 (100%)
Cortex								
Present		1	12	5	1			19 (57.6%)
Absent			11	1			2	14 (42.4%)
Total (%)		1 (3%)	23 (69.7%)	6 (18.2%)	1 (3%)		2 (6.1%)	33 (100%)
Flake Type (Sullivan and Rosen 1985)								
Complete		1	13	3			2	19 (57.6%)
Broken			7	2				9 (27.3%)
Flake Fragment			3	1	1			5 (15.2%)
Debris								
Total (%)		1 (3%)	23 (69.7%)	6 (18.2%)	1 (3%)		2 (6.1%)	33 (100%)

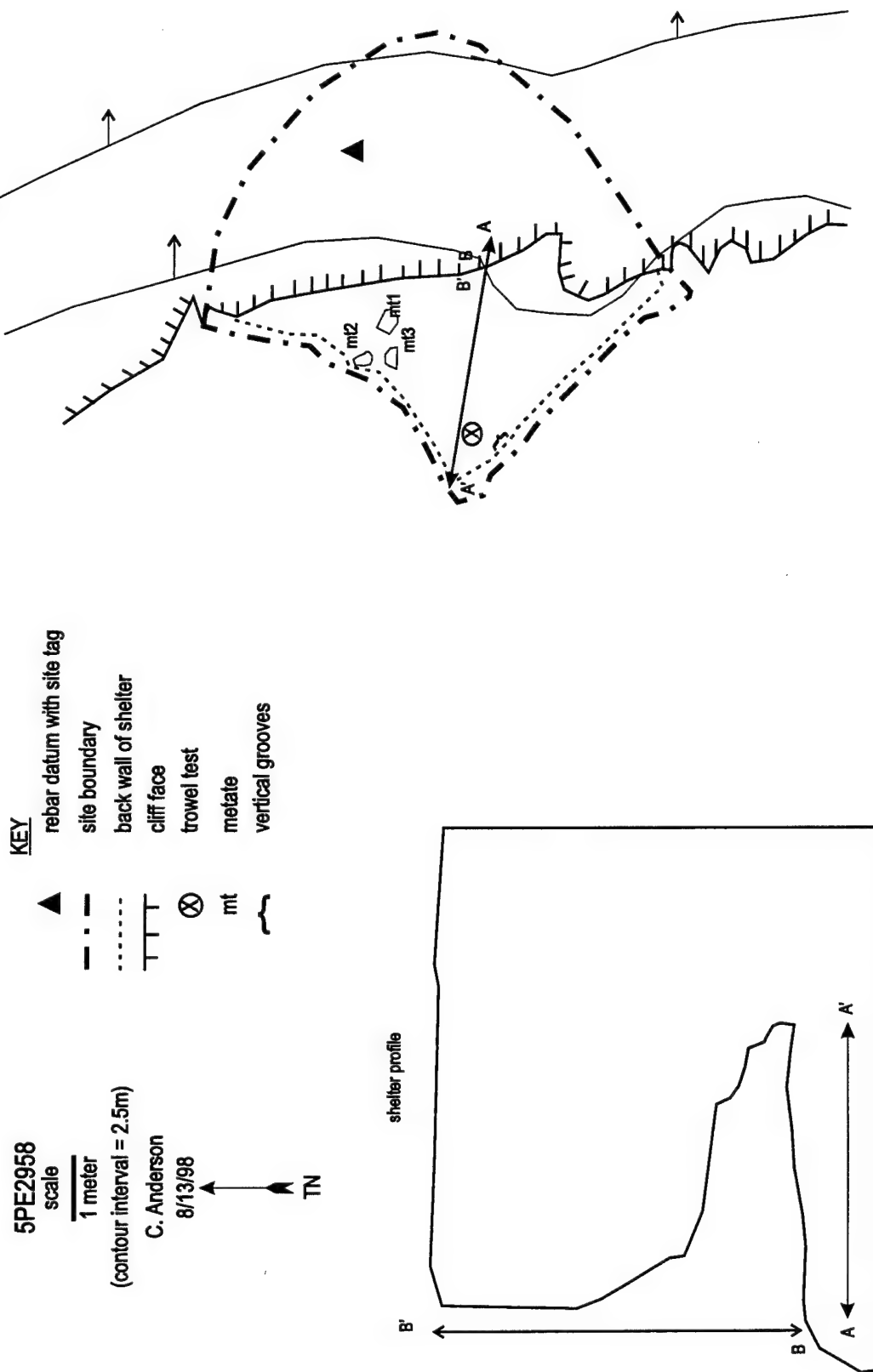


Figure III.72. Site Map, 5PE2958.

Slab metates are present in the interior of the shelter, and a sparse flaked-lithic scatter was noted on the slope in front of the shelter. A total of ten artifacts was recorded. The artifacts include three sandstone slab metates and seven flakes. The surface flakes (Table III.58) and the metates were analyzed in the field. The subsurface flake was collected. This flake is a medium-sized, broken simple flake, which lacks cortex. All the observed lithic raw material types are locally available. The small number of flakes limits the inferences on cultural activities that can be drawn; however, two inferences include food processing, and lithic reduction. The shelter represents at least a locus of temporary prehistoric occupation of undetermined age and cultural affiliation.

Statement of Significance: A trowel test in the shelter indicates that the shelter has the potential for significant intact subsurface deposits. Charcoal present in the subsurface sediments is possibly datable. The site is recommended as eligible for nomination to the NHRP, under the themes of settlement patterns, paleoclimates, chronology and cultural relationships, and prehistoric economies as identified by Zier et al.(1997) in the CRMP.

Management Recommendation: Avoid and Test. Military disturbance and some erosional impacts are present at the site. Subsurface excavations are necessary to determine if intact deposits are present. The surface data suggests a potential for buried deposits, testing is recommended to determine if the eligibility recommendation is justified.

5PE2959

Site Type: Historical Homesteading/Agriculture-Related Non-Habitation Site

Elevation: 5940 ft (1811 m) asl

Aspect: 280° Slope: 5°

Site Dimensions: 30 m SW/NE x 15 m SE/NW

This site is located on a ridge on the west side and near the base of Booth Mountain and consists of a relatively light scatter of historic artifacts. The site is between two north/south military two-track roads on a gentle slope with one large sandstone boulder and gravels exposed on the surface (Figure III.73). The artifacts are dispersed down the slope. Vegetation includes cholla, pinon, juniper, prickly pear cactus, grasses, mountain mahogany, and sunflowers. The exposed sediments are shallow (20 cm) and are gravelly brown silt. Military debris is present on the site, and there is also evidence for minor erosion.

Approximately 150 glass and ceramic artifacts were identified. The ceramic artifacts are limited to ten fragments of plain whiteware. The remaining artifacts are almost entirely bottle or jar glass except for one piece of purple pressed glass with a floral design, and milk glass liner fragments from a canning jar (one liner is still attached to the lid.) Various colors of glass were present including amethyst, cobalt, clear, light green, amber, and light blue. Some of the light green glass pieces are part of at least three 10 oz "Coke" bottles. Five bottle finishes were observed. Two were hand-finished solarized glass patent lip finishes, and three finishes were made in an automatic bottle machine. Two of the three are from continuous thread clear bottles and the other is a double crown lip from a light green bottle. One maker's mark was noted on the base of a piece of amber glass that indicates that it was made by Owens Illinois Glass Co from 1929-1954 (Toulouse 1971:403). Two of the pieces of solarized glass that fit together had this partial embossment: "...RAB APPLE CREAM BRAND". One complete bottle was collected. This bottle resembles a squat, square ink bottle with a screw top (Putnam 1965:60).

The amethyst (solarized) glass dates to before WWI, but most of the artifacts were manufactured later (ca.1930-50s). Numerous pieces of modern army trash are mixed with the other artifacts. The site is a trash dump that most likely represents items accumulated over the period of time discussed above. The ethnic affiliation of the site is unknown. A Stock Raising Homestead Patent for the area in which the site is located was granted to William Manderson on May 3, 1920 (Zier et al.1987: Appendix E).

Statement of Significance: The site lacks the potential for further information based on the number of artifacts, the lack of observable features, and the absence of significant soil deposition. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

Table III.58. Flaked-lithic Debitage, 5PE2958.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	4	2						7 (100%)
1/4"-1/2"										
<1/4"										
Total (%)		1 (14.3%)	4 (57.1%)	2 (28.6%)						7 (100%)
Flake Type										
Shatter			1	1						2 (28.6%)
Simple			1							1 (14.3%)
Complex		1	2	1						4 (57.1%)
Bifacial Thinning										
Total (%)		1 (14.3%)	4 (57.1%)	2 (28.6%)						7 (100%)
Cortex										
Present			2	2						4 (57.1%)
Absent		1	2							3 (42.9%)
Total (%)		1 (14.3%)	4 (57.1%)	2 (28.6%)						7 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1	2							3 (42.9%)
Broken			1	1						2 (28.6%)
Flake Fragment										
Debris			1	1						2 (28.6%)
Total (%)		1 (14.3%)	4 (57.1%)	2 (28.6%)						7 (100%)

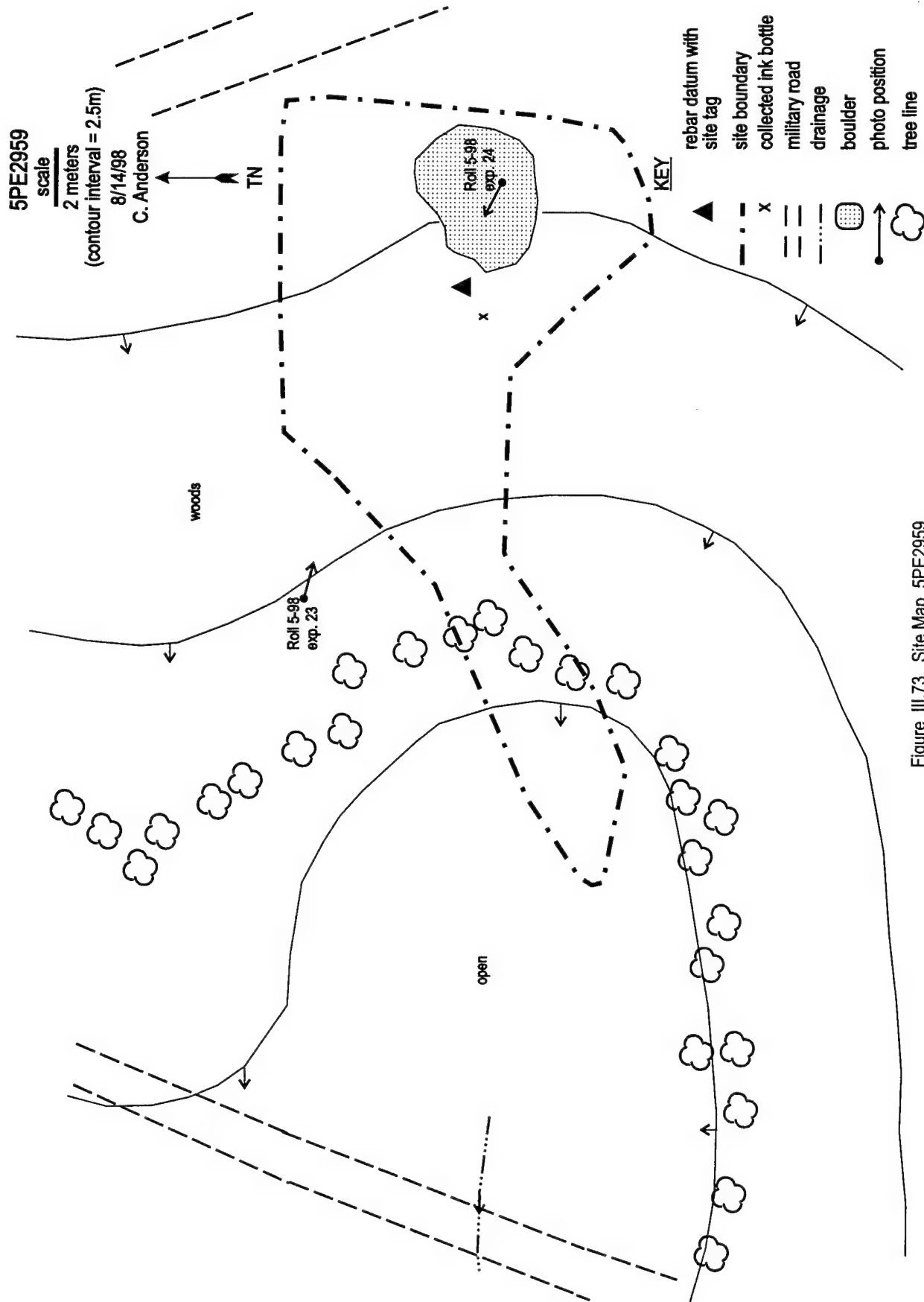


Figure III.73. Site Map, 5PE2959.

5PE2960

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6000 ft (1829 m) asl

Aspect: 80° Slope: 3°

Site Dimensions: 45 m E/W x 10 m N/S

This site is located on the east edge of a ridge overlooking Red Creek and is a sparse flaked-lithic scatter. Exposures of sandstone bedrock and gravels are common on the surface, which slopes gently to the east/southeast (Figure III.74). The site area is in the open with only a few pinon and juniper trees, some grasses, prickly pear, and cholla cactus. Open grassland is immediately west of the site. The sandy sediments are no more than 15 cm deep. Military disturbance has impacted the site, as evidenced by vehicle tracks, hearths, and military debris. Numerous broken gravels caused by vehicular traffic are present as well.

A total of fifty artifacts was discovered. The artifacts include two chert bifaces, one silicified wood biface, and forty-seven flakes. The bifaces were collected and the flakes were analyzed in the field (Table III.59). A variety of local raw material types are present. Core reduction was likely the primary activity performed at the site, although some tool manufacturing probably also took place. Early to middle stages of core reduction are apparent, based on the number of large flakes and the near even division of flakes with cortex versus flakes without (Ahler and Smail 1999). There are more complex than simple flakes, but complex flakes may represent middle stages of reduction as well as latter stages. The number of complex flakes could also be interpreted as a result of latter stages of lithic reduction, such as tool production. According to Sullivan and Rosen's (1985) system, the flake assemblage suggests more of an emphasis on core reduction activities, although tool manufacturing activities are also indicated. The site represents a temporary locus of prehistoric occupation of undetermined age and cultural affiliation.

Statement of Significance: The site has little research potential, primarily due to the shallow sediment deposition and the significant amount of military disturbance. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2961

Site Type: Historic Human Grave Site

Elevation: 5880 ft (1792 m) asl

Aspect: 350° Slope: 8°

Site Dimensions: 7.5 m E/W x 4.5 m N/S

This site is a rock shelter with two historic rock art panels with incised inscriptions that suggest the presence of a historic grave. The shelter is at the base of a vertical sandstone escarpment on the south side of a small canyon (Figure III.75, Figure III.76). The terrain below the shelter slopes a short distance to an ephemeral drainage that flows eastward towards Red Creek. Vegetation in front of the shelter includes gooseberry, skunkbush, and grasses. The sediments within the shelter consist of a light brown sand that is greater than 30 cm in depth. The fill is highest in the back of the shelter where packrat middens are located. A small amount of military trash in and around the shelter suggests limited modern use.

Two panels were found on the wall of the shelter. A portion of the back wall extends northward towards the opening, forming a small dividing wall. The panels are located on opposite sides of the wall. Panel 1 is on the east side and Panel 2 is on the west side. Panel 1 is incised with the inscriptions "R.I.P." "JOHN H LAWRENCE" and "1801-1887" (Figure III.77). The panel measures 38 cm x 33 cm and is 104 cm above the floor of the shelter. Panel 2 is incised with the word "JOHN" (Figure III.77). The panel measures 16 cm x 6 cm and is 67 cm above the floor of the shelter. Both panels are subject to continued mechanical weathering. There was no surface indication of a grave, and no artifacts were associated with the site.

Archival research may aid in establishing the validity of the interpreted grave. The panels appear to have some age based

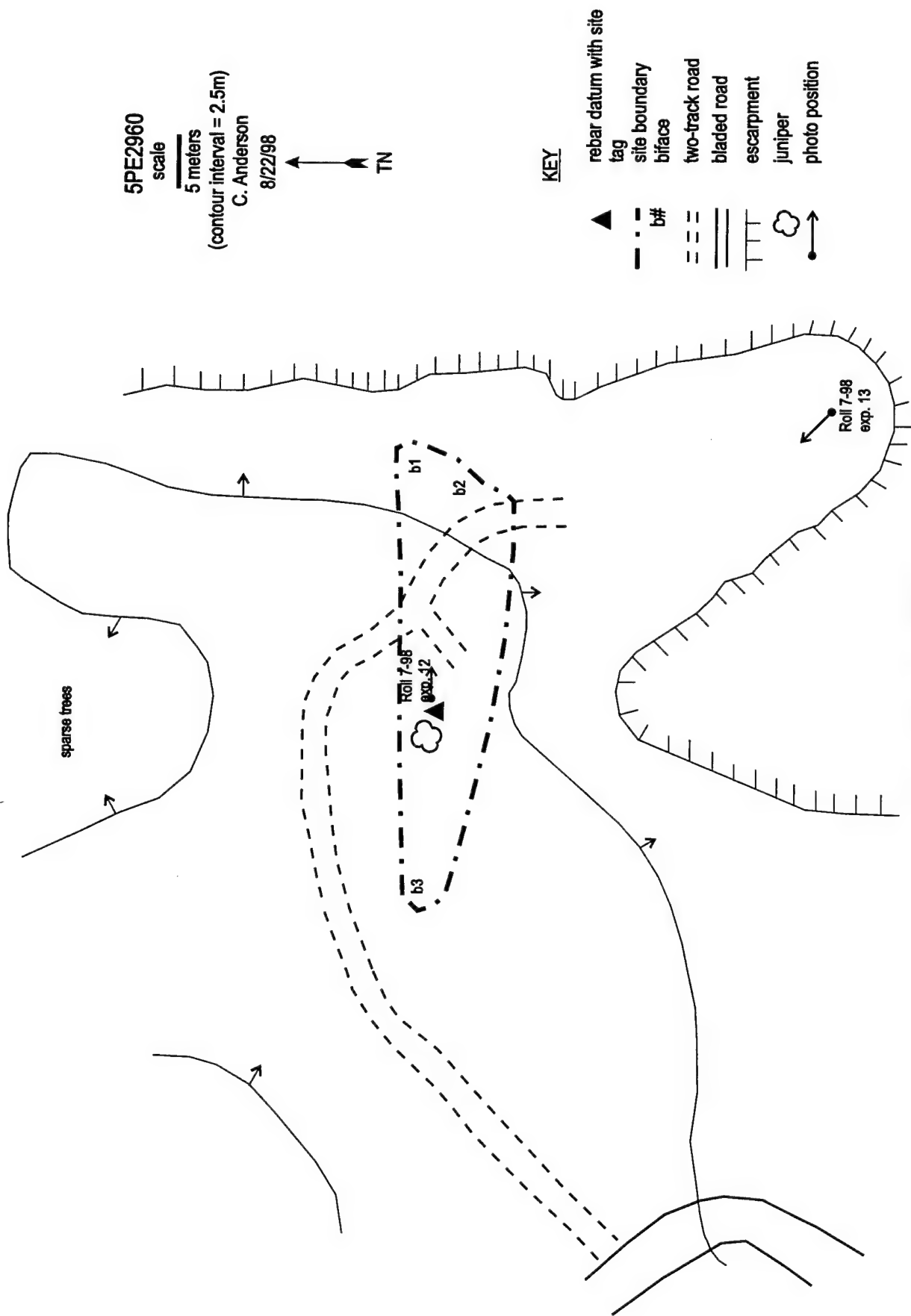


Figure III.74. Site Map, 5PE2960.

Table III.59. Flaked-lithic Debitage, 5PE2960.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	2	23	2		4			32 (68.1%)
1/4"-1/2"		2		11						13 (27.7%)
<1/4"				2						2 (4.3%)
Total (%)		3 (6.4%)	2 (4.3%)	36 (76.6%)	2 (4.3%)		4 (8.5%)			47 (100%)
Flake Type										
Shatter		1		4						5 (10.6%)
Simple		1		8			4			13 (27.7%)
Complex		1	2	24	2					29 (61.7%)
Bifacial Thinning										
Total (%)		3 (6.4%)	2 (4.3%)	36 (76.6%)	2 (4.3%)		4 (8.5%)			47 (100%)
Cortex										
Present		2	1	20	1		2			26 (55.5%)
Absent		1	1	16	1		2			21 (44.7%)
Total (%)		3 (6.4%)	2 (4.3%)	36 (76.6%)	2 (4.3%)		4 (8.5%)			47 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1		22	1		2			26 (55.3%)
Broken			1	7	1		2			11 (23.4%)
Flake Fragment		1	1	3						5 (10.6%)
Debris		1		4						5 (10.6%)
Total (%)		3 (6.4%)	2 (4.3%)	36 (76.6%)	2 (4.3%)		4 (8.5%)			47 (100%)

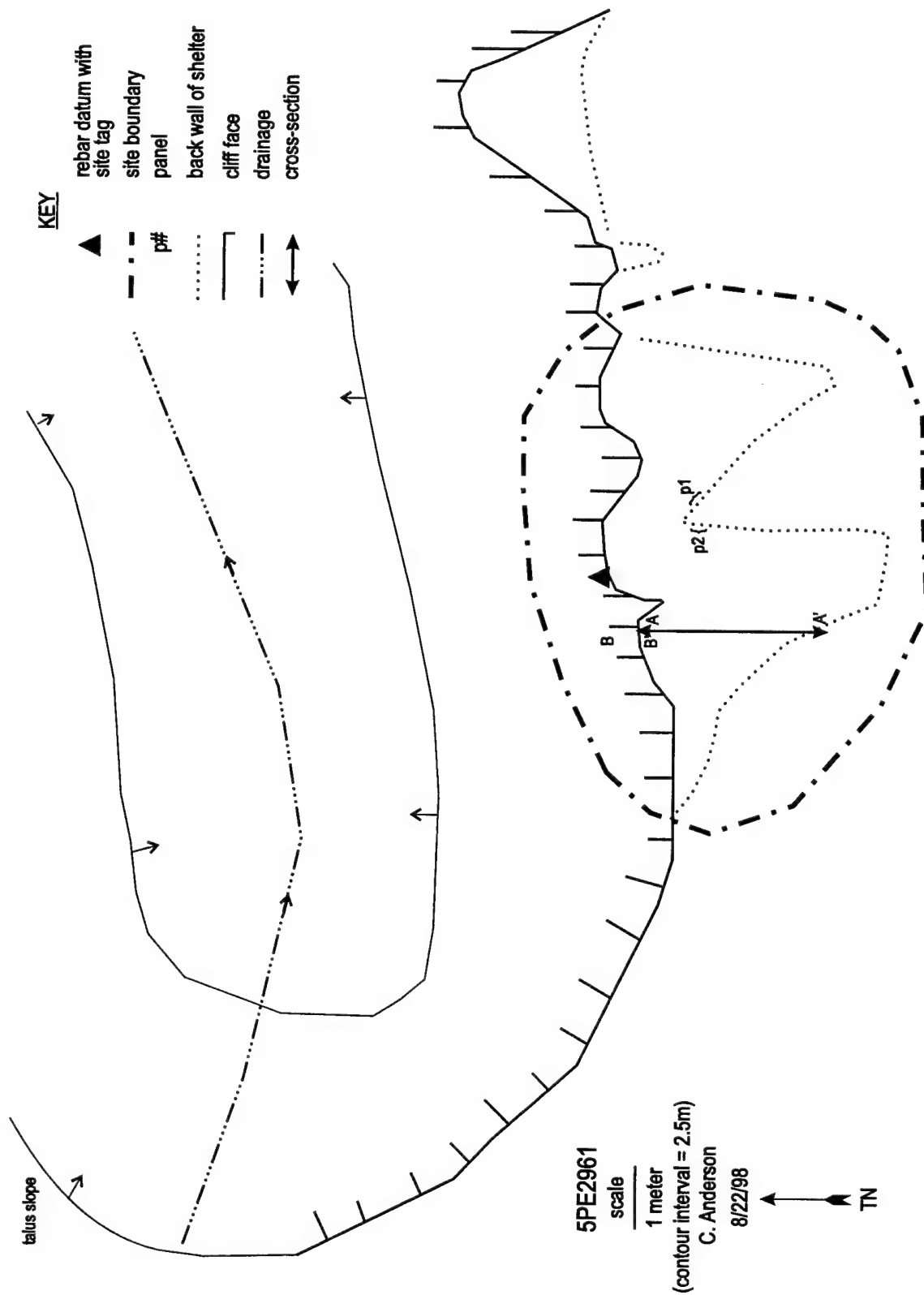


Figure III.75. Site Map, 5PE2961.

5PE2961

Cross-section Map

scale

1 meter

C. Anderson

8/22/98

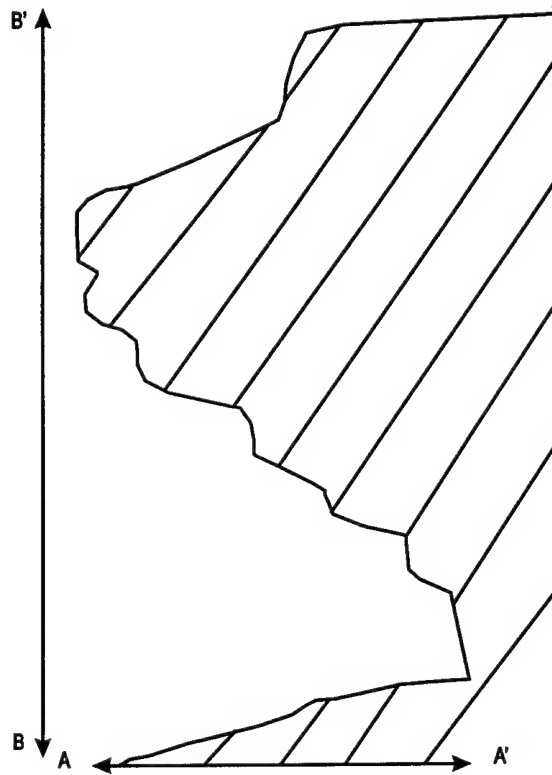
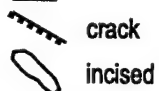


Figure III.76. Cross -section Map, 5PE2961.

5PE2961
Rock Art Panels

Panel 1
scale
2 cm

KEY



R.I.P

JOHN
MY
LAWRENCE
1801 - 1887

distance to panel edge is 85 cm



Panel 2

scale
1 cm

KEY



distance to panel edge is 15 cm



JOHN

Figure III.77. Rock Art Panels, 5PE2961.

on the natural weathering and the rounded edges of the lettering. If the dates are correct, the site is over 150 years old. The ethnic affiliation of John Lawrence is not known.

Statement of Significance: The incised inscriptions in the shelter may represent a grave marker. Isolated historic human graves are not recommended as eligible for nomination to the NRHP.

Management Recommendation: No further archaeological work.

5PE2962

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5810 ft (1771 m) asl

Aspect: 180° Slope: 2°

Site Dimensions: 40 m N/S x 23 m E/W

This site is a sparse flaked-lithic artifact scatter located on a north/south-trending ridge bounded by ephemeral drainages (Figure III.78). The ridge is on the southwest slope of Booth Mountain. A higher ridge is visible to the northeast. The artifacts are exposed on a gentle slope of the ridge top in an area subject to slope wash. The sediments are a shallow (5 cm) tan sandy silt with gravels. Sandstone bedrock is exposed in numerous places on the surface. The vegetation consists of pinon, juniper, prickly pear cactus, cholla, and bunch grasses. Besides slope wash, impacts to the site include military vehicular traffic.

A total of sixteen artifacts was discovered. The artifacts include one orthoquartzite biface fragment, one retouched chert flake, and fourteen flakes. Both tools were collected. The fourteen flakes were analyzed in the field (Table III.60). The raw material types are locally available. The small number of flakes limits the inferences that can be drawn from the assemblage. The site represents a locus of temporary prehistoric occupation of undetermined age and cultural affiliation.

Statement of Significance: The site has little potential to yield significant information based on the small number of artifacts, the lack of significant sediment deposition, and the absence of observable features. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2963

Site Type: Prehistoric Sheltered Site

Elevation: 5760 ft (1756 m) asl

Aspect: 90° Slope: 1°

Site Dimensions: 14.5 m N/S x 11 m E/W

This site consists of a rock shelter with one feature and a sparse artifact scatter. The site is located at the base of a sandstone escarpment exposed along the west side of a north/south trending drainage (Figure III.79 and III.80) on the southwest slope of Booth Mountain. The shelter is directly adjacent to and slightly higher than the drainage. Vegetation around the site in the drainage consists of pinon, juniper, cholla, serviceberry, bunch grasses, prickly pear cactus, and scrub oak. A trowel test in the shelter demonstrated at least 26 cm of sediment deposition, but it may be deeper in other areas due to periodic flooding of the rock shelter (the shelter is 40-60 cm above the floor of the drainage). The sediments are a gray silt.

The feature consists of a semi-circle of unshaped sandstone that resembles a low wall. The wall is 2.5 m long and 0.5 m wide. A total of four artifacts was identified. Two chert flakes and one sandstone slab metate were located on the surface of the site. The metate was found in the shelter and the flakes were in front of the shelter. The trowel test within the shelter recovered the fourth artifact, a bifacially retouched chert flake (collected) recovered from a depth of 26 cm. The site represents a locus of prehistoric occupation of undetermined age or cultural affiliation. The metate indicates that food processing occurred at the site. The presence of buried cultural material suggests that more information about the site is

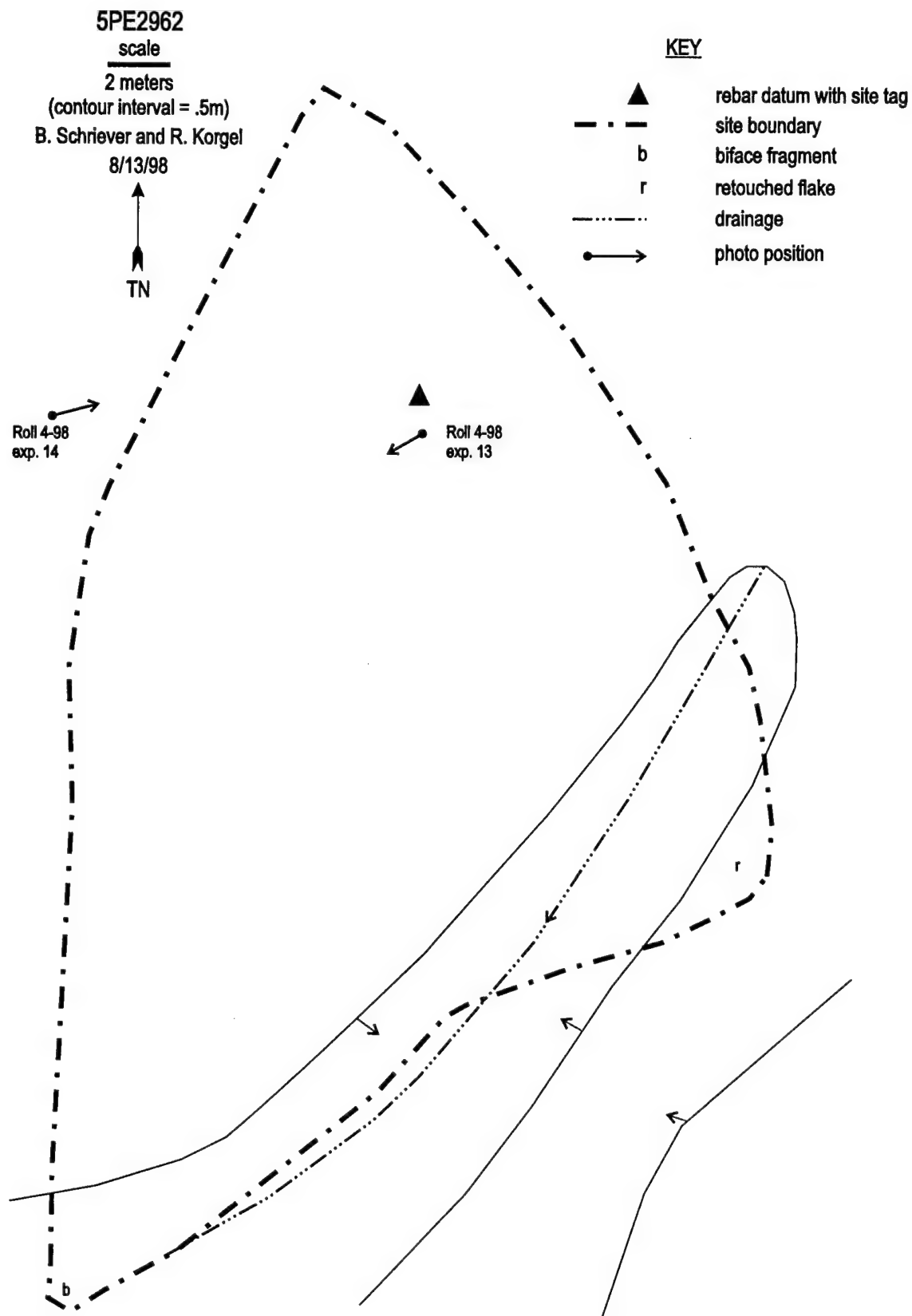


Figure III.78. Site Map, 5PE2962.

Table III.60. Flaked-lithic Debitage, 5PE2962.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		3		3	1					7 (50%)
1/4"-1/2"		1		2						3 (21.4%)
<1/4"				4						4 (28.6%)
Total (%)		4 (28.6%)		9 (64.3%)	1 (7.1%)					14 (100%)
Flake Type										
Shatter				2						2 (14.3%)
Simple		3		6						9 (64.3%)
Complex		1		1	1					3 (21.4%)
Bifacial Thinning										
Total (%)		4 (28.6%)		9 (64.3%)	1 (7.1%)					14 (100%)
Cortex										
Present										
Absent		4		9	1					14 (100%)
Total (%)		4 (28.6%)		9 (64.3%)	1 (7.1%)					14 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete										
Broken		2		2	1					5 (35.7%)
Flake Fragment		2		5						7 (50%)
Debris				2						2 (14.3%)
Total (%)		4 (28.6%)		9 (64.3%)	1 (7.1%)					14 (100%)

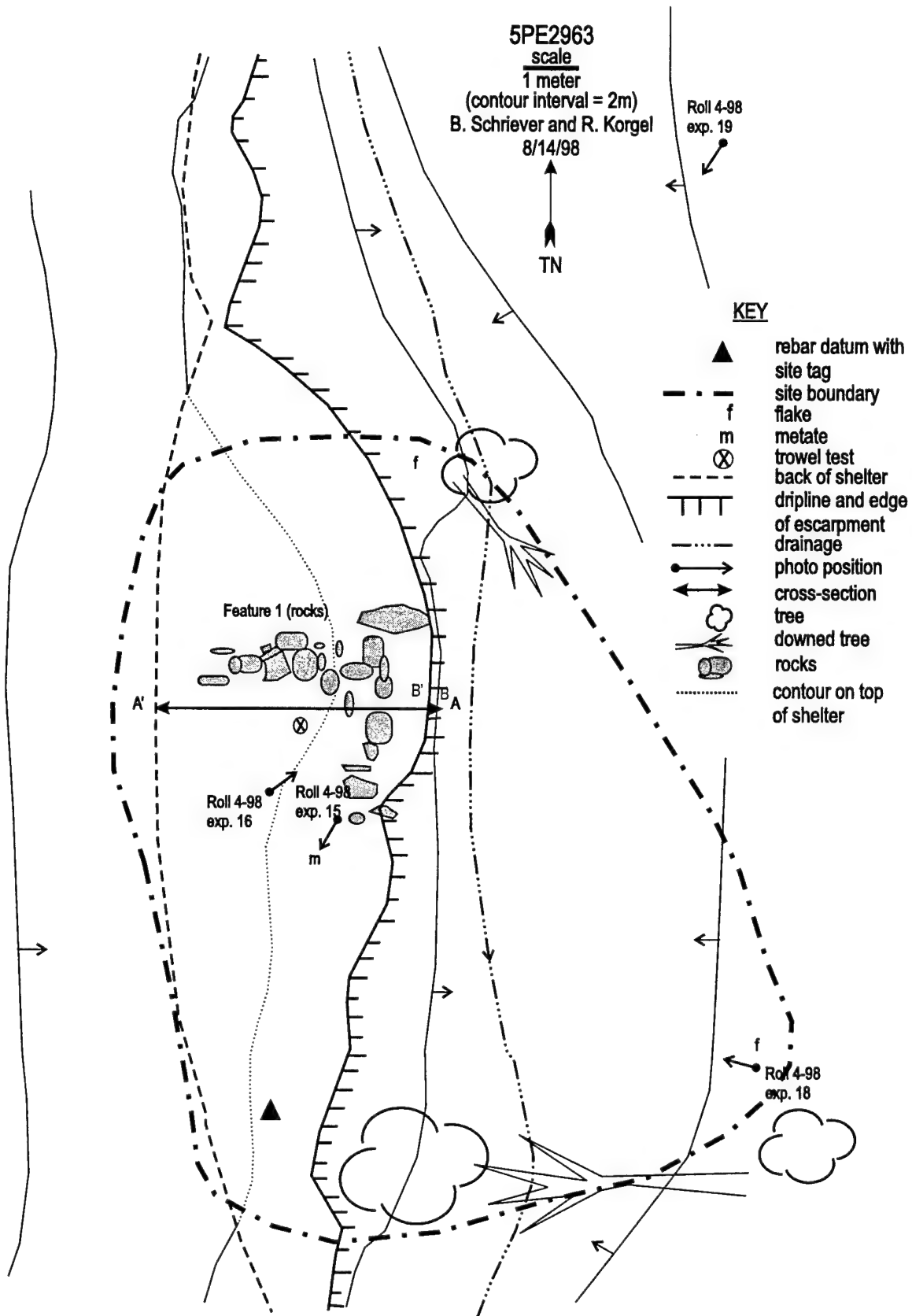


Figure III.79. Site Map, 5PE2963.

5PE2963
Cross-section Map
scale  25 cm
R. Korgel
8/13/98

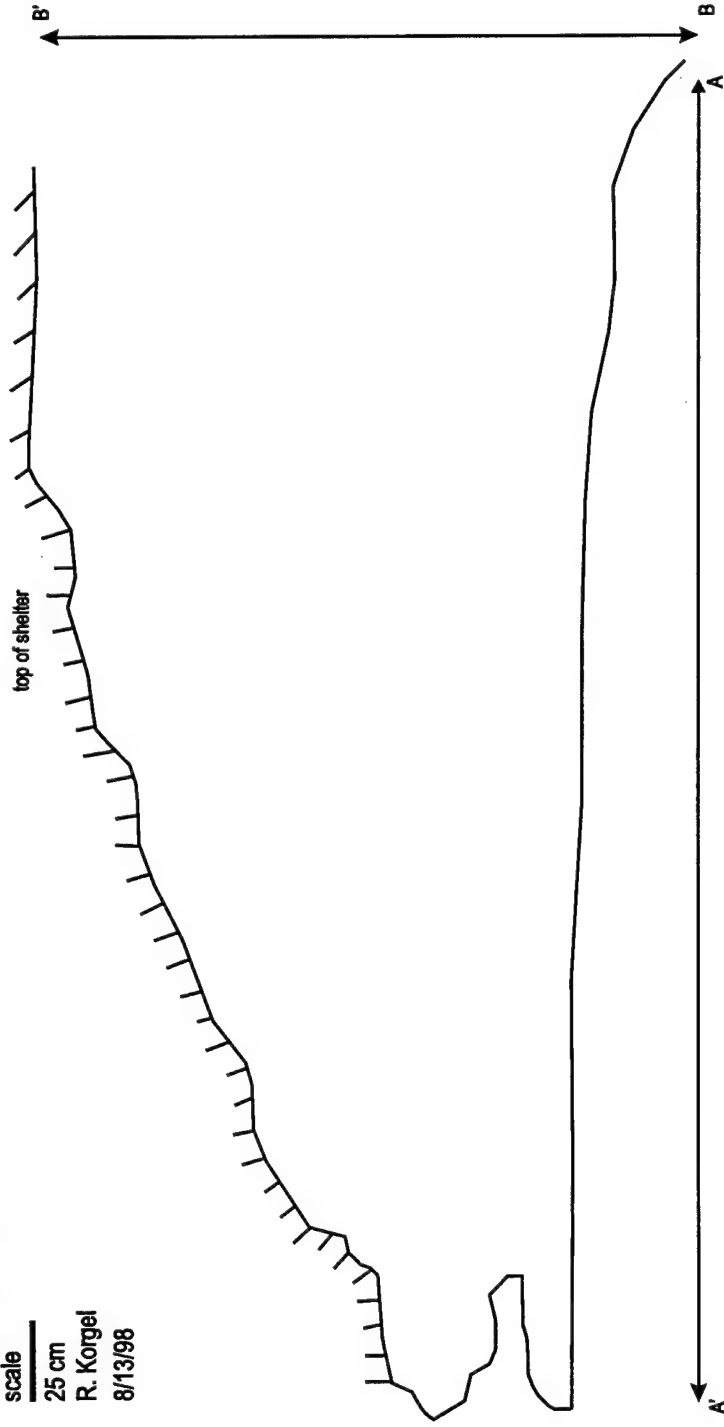


Figure III.80. Cross-section Map, 5PE2963.

available in subsurface sediments.

Statement of Significance: The site possesses a feature that may have served as a temporary shelter, and the site has the potential for further subsurface cultural deposits. It has the potential to yield significant information within the research themes of chronology and cultural relationships, settlement patterns, prehistoric economies, and paleoclimates as defined in the CRMP (Zier et al. 1997). The site is potentially eligible for nomination to the NRHP.

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggests a potential for buried deposits, but testing is recommended to determine if the eligibility recommendation is justified.

5PE2964

Site Type: Prehistoric Open Structure Site
Elevation: 5790 ft (1765 m) asl
Aspect: 228° Slope: 2-5°
Site Dimensions: 56 m NE/SW x 25 m NW/SE

This site consists of a large, but diffuse assemblage of flaked-lithic artifacts, a mano fragment and a circular stone feature (Figure III.81). The site is on a gentle southwest slope on the west side of Booth Mountain above and west of a north/south trending drainage that flows into Booth Gulch. The vegetation at the site includes pinon, juniper, yucca, scrub oak, serviceberry, prickly pear cactus, cholla, and short grasses. Dakota sandstone bedrock is exposed over 25 percent of the site, and there is some evidence of military disturbance in the form of debris and foot traffic.

Feature 1 consists of a 2/3 circle of unshaped, angular sandstone with two upright sandstone slabs (Figure III.82). The end opens to the southwest. The feature measures 5.5 m north and south x 4.4 m east and west. Based on the architecture, the site may date to the Early to Middle Ceramic periods.

A total of twenty-four artifacts was identified. The artifacts include one sandstone mano fragment, one utilized chert flake (collected), and twenty-two flakes (Table III.61). The lithic raw material types are locally available. Activities inferred from the artifact assemblage include core reduction, tool manufacture, and food processing. There is evidence to support limited amounts of both core reduction and tool production. According to Ahler and Smail (1999), the lack of artifacts with cortex, the number of complex flakes and the presence of one bifacial thinning flake suggest latter stages of reduction or tool production. The Sullivan and Rosen (1985) classification system suggests a slightly greater emphasis on tool manufacturing activities as opposed to core reduction. Site 5PE2965 is located 80 m to the south and, although the two sites are separated, it is possible that they represent the same occupational sequence.

Statement of Significance: The site has an undisturbed circular stone feature that may date to the Early to Middle Ceramic periods, and has the potential to yield significant information on the prehistoric architecture of Fort Carson. The number and variety of flaked-lithic artifacts, and the potential for buried deposits within the areas of sediment accumulation, indicate that the site has potential to yield significant information on the research themes of settlement patterns, prehistoric economies, architecture, chronology and cultural relationships, as defined in the CRMP (Zier et al. 1997). The site is recommended as eligible for nomination to the NRHP.

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data, including a stone feature, suggests a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified.

5PE2964
 scale
 4 meters
 (contour interval = .5m)
 C. Markussen, B. Schriever, and M. Charles
 8/22/98

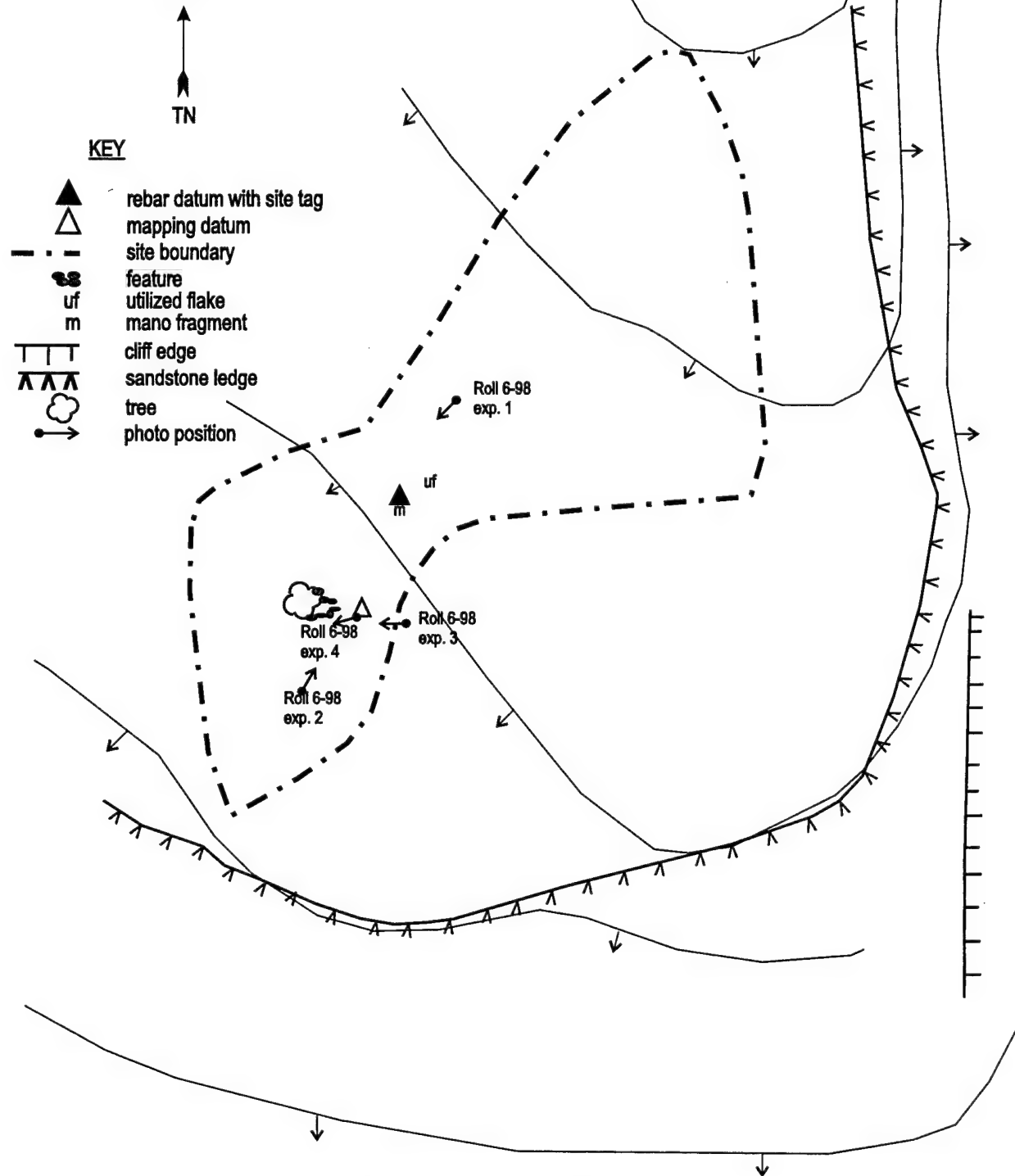


Figure III.81. Site Map, 5PE2964.

5PE2964

Feature 1
scale

50 cm

K. Heidemann and J. Hall

8/22/98



KEY



mapping datum



sandstone rock



upright sandstone rock

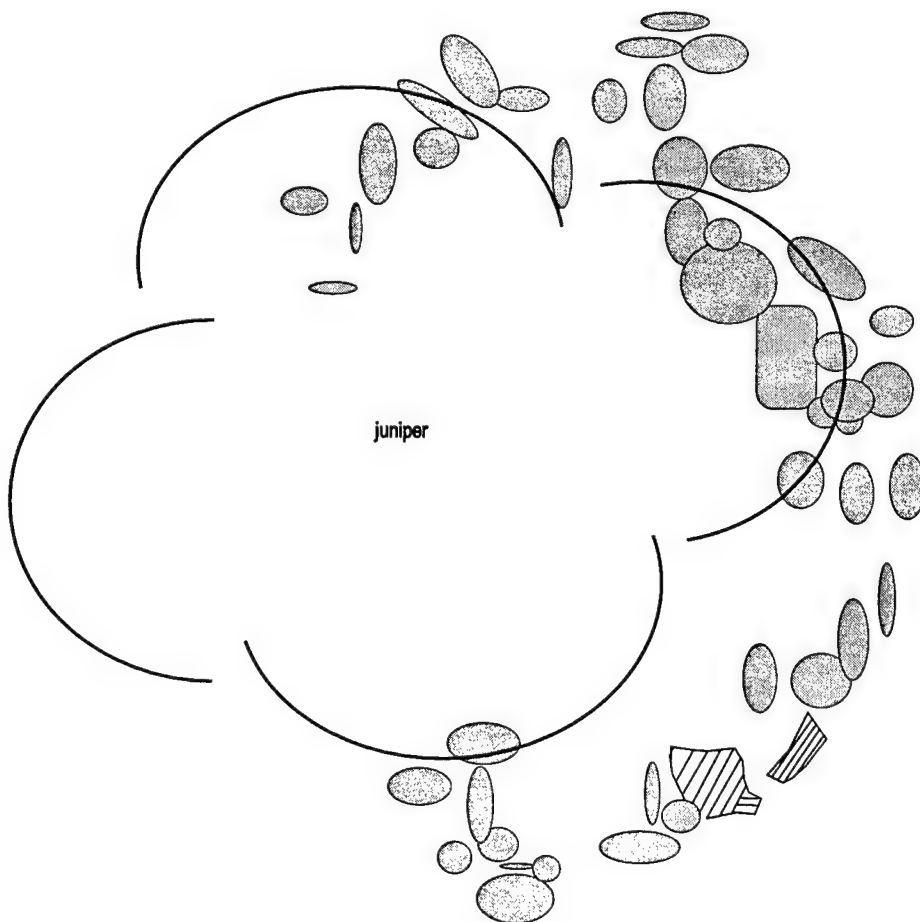


Figure III.82. Feature 1, 5PE2964.

Table III.61. Flaked-lithic Debitage, 5PE2964.

Material Type										Total (%)
	Hornfels and Basalts	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		1	5	7						13 (59.1%)
1/4"-1/2"			1	3						4 (18.2%)
<1/4"			1	3						5 (22.7%)
Total (%)		1 (4.5%)	7 (31.8%)	13 (59.1%)	1 (4.5%)					22 (100%)
Flake Type										
Shatter		1	1	3	1					6 (27.3%)
Simple			4	2						6 (27.3%)
Complex			2	7						9 (40.9%)
Bifacial Thinning				1						1 (4.5%)
Total (%)		1 (4.5%)	7 (31.8%)	13 (59.1%)	1 (4.5%)					22 (100%)
Cortex										
Present				2						2 (9.1%)
Absent		1	7	11	1					20 (90.9%)
Total (%)		1 (4.5%)	7 (31.8%)	13 (59.1%)	1 (4.5%)					22 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			3	1						4 (18.2%)
Broken			1	4						5 (22.7%)
Flake Fragment			2	5						7 (31.8%)
Debris		1	1	3	1					6 (27.3%)
Total (%)		1 (4.5%)	7 (31.8%)	13 (59.1%)	1 (4.5%)					22 (100%)

5PE2965

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5750 ft (1753 m)

Aspect: 195°

Slope: 2-5°

Site Dimensions: 70 m NE/SW x 38 m NW/SE

This site is a spatially large, but relatively sparse scatter of flaked-lithic artifacts, a hammerstone, and a mano. The site is located on a gentle southwest slope along the west side of Booth Mountain (Figure III.83). A relatively large unnamed intermittent drainage is 23 m east of the site. Sandstone bedrock is exposed over 25 percent of the site with artifacts collecting in the sediment traps between bedrock exposures. The sediments are a sandy loam up to 30 cm deep. Slope wash erosion on the exposed bedrock has resulted in artifact displacement. The vegetation is comprised of pinon, juniper, serviceberry, scrub oak, currant, yucca, prickly pear cactus, mountain mahogany, cholla, and short grasses.

A total of forty-five artifacts was identified. The majority of the artifacts were found within three concentrations. Nine tools, one mano, and thirty-five flakes were observed. The tools include one quartzite hammerstone, three retouched chert flakes, one retouched rhyolite flake, one chalcedony biface, one orthoquartzite biface, and two chert bifaces. All the tools, except the hammerstone, were collected. The mano and the flakes were analyzed in the field (Table III.62). Local lithic raw materials were utilized at the site. Activities inferred from the artifact assemblage include food processing, tool manufacturing, core reduction, and hunting. The number of large flakes, the number of simple flakes and the small amount of flakes with cortex could be interpreted as an indication of early to middle stages of lithic reduction (Ahler and Smail 1999), although a slightly greater emphasis on tool manufacturing activities as opposed to core reduction is suggested by Sullivan and Rosen's (1985) classification system. The site represents an occupation of unknown age and cultural affiliation. Another site, 5PE2964, is 80 m up slope from this site. Although separate, the two sites may have been occupied simultaneously.

Statement of Significance: The lack of features, the shallow sediment depth, and the amount of exposed bedrock indicate that the site has little potential for further significant information. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2966

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6040 ft (1841 m) asl

Aspect: 270°

Slope: 1-5°

Site Dimensions: 36 m E/W x 61 m N/S

This site is a flaked-lithic artifact scatter located on a saddle south of Wild Mountain. The saddle gently slopes upward to the north and south, and slopes downward to the east and west (Figure III.84). Intermittent drainages are present east and west of the saddle. The vegetation on the site and in the surrounding area includes pinon, juniper, prickly pear cactus, sunflower, bunch grasses, and short prairie grasses. Artifacts are concentrated within disturbed areas. This implies that the artifacts were at least minimally buried. It is difficult to assess the extent of subsurface deposits at the site because of the disturbance, but the soil depth exceeds 20 cm. The soil is a gray silty sand with gravels. The extent of damage from various activities is unknown, but damage seems fairly heavy. There is vehicle disturbance throughout the lithic concentration in the northern half of the site.

One chert drill tip, one broken orthoquartzite projectile point, and a silicified wood biface fragment were the only tools identified and were collected. Fifty-three flakes (Table III.63) and one chert core fragment were also present on the surface. A variety of lithic material types are present in the assemblage. Inferred activities at the site include flaked-tool manufacture, plant and animal processing and core reduction. Local lithic raw material types were utilized. Core reduction may have been the more dominant, although some tool production also took place. Early to middle stages of core reduction are inferred from the presence of a large number of large flakes. On the other hand, the percentage of flakes without cortex suggest middle stages of core reduction. The small number of complex flakes indicates a minor amount of tool production.

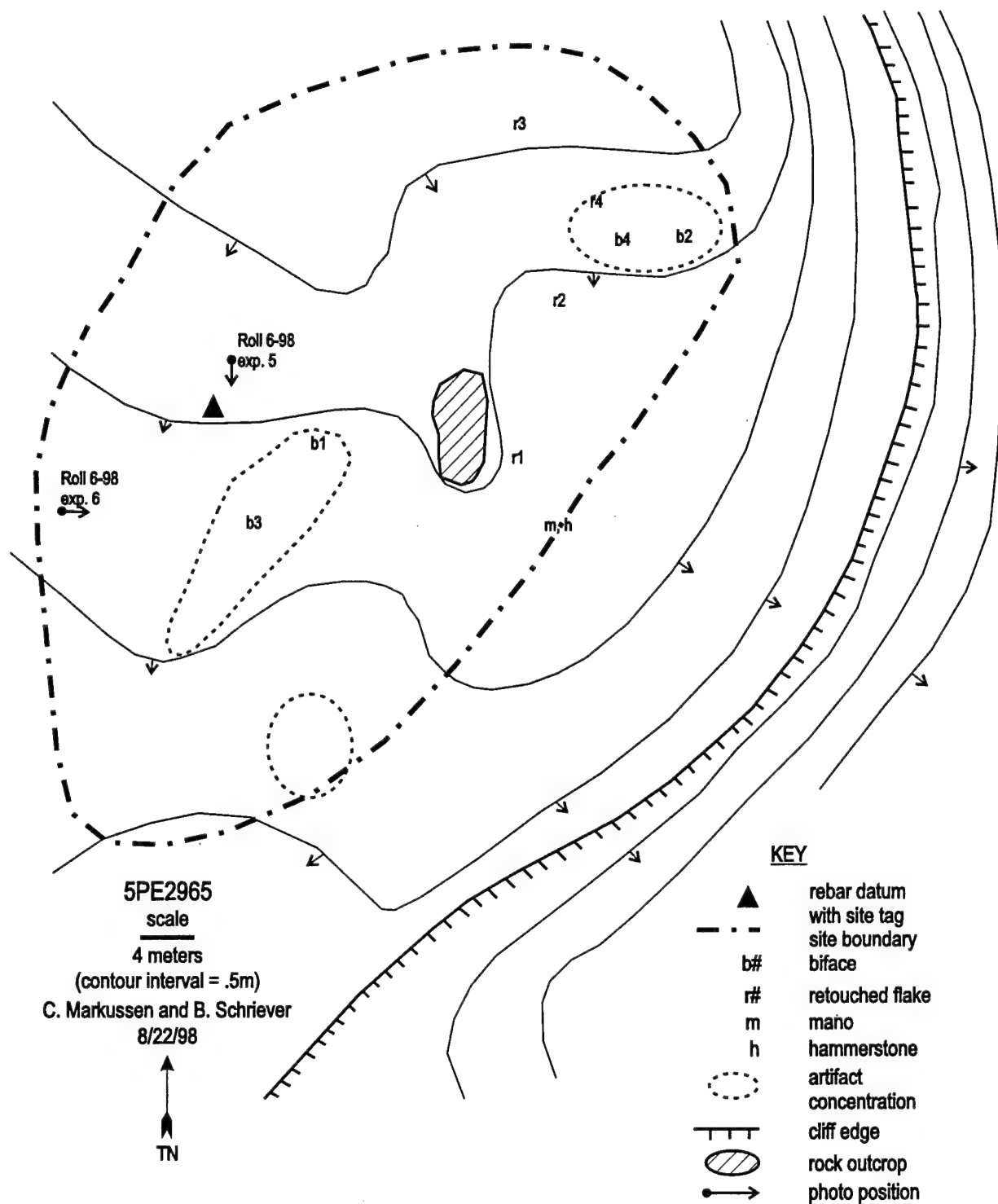


Figure III.83. Site Map, 5PE2965.

Table III.62. Flaked-lithic Debitage, 5PE2965.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		15	8	1						24 (68.6%)
1/4"-1/2"		6	2							8 (22.9%)
<1/4"		1	2							3 (8.6%)
Total (%)		22 (62.9%)	12 (34.3%)	1 (2.9%)						35 (100%)
Flake Type										
Shatter		3	3							6 (17.1%)
Simple		17	6	1						24 (68.6%)
Complex		2	3							5 (14.3%)
Bifacial Thinning										
Total (%)		22 (62.9%)	12 (34.3%)	1 (2.9%)						35 (100%)
Cortex										
Present			3							3 (8.6%)
Absent		22	9	1						32 (91.4%)
Total (%)		22 (62.9%)	12 (34.3%)	1 (2.9%)						35 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		10	1							11 (31.4%)
Broken		7	4							11 (31.4%)
Flake Fragment		2	4	1						7 (20%)
Debris		3	3							6 (17.1%)
Total (%)		22 (62.9%)	12 (34.3%)	1 (2.9%)						35 (100%)

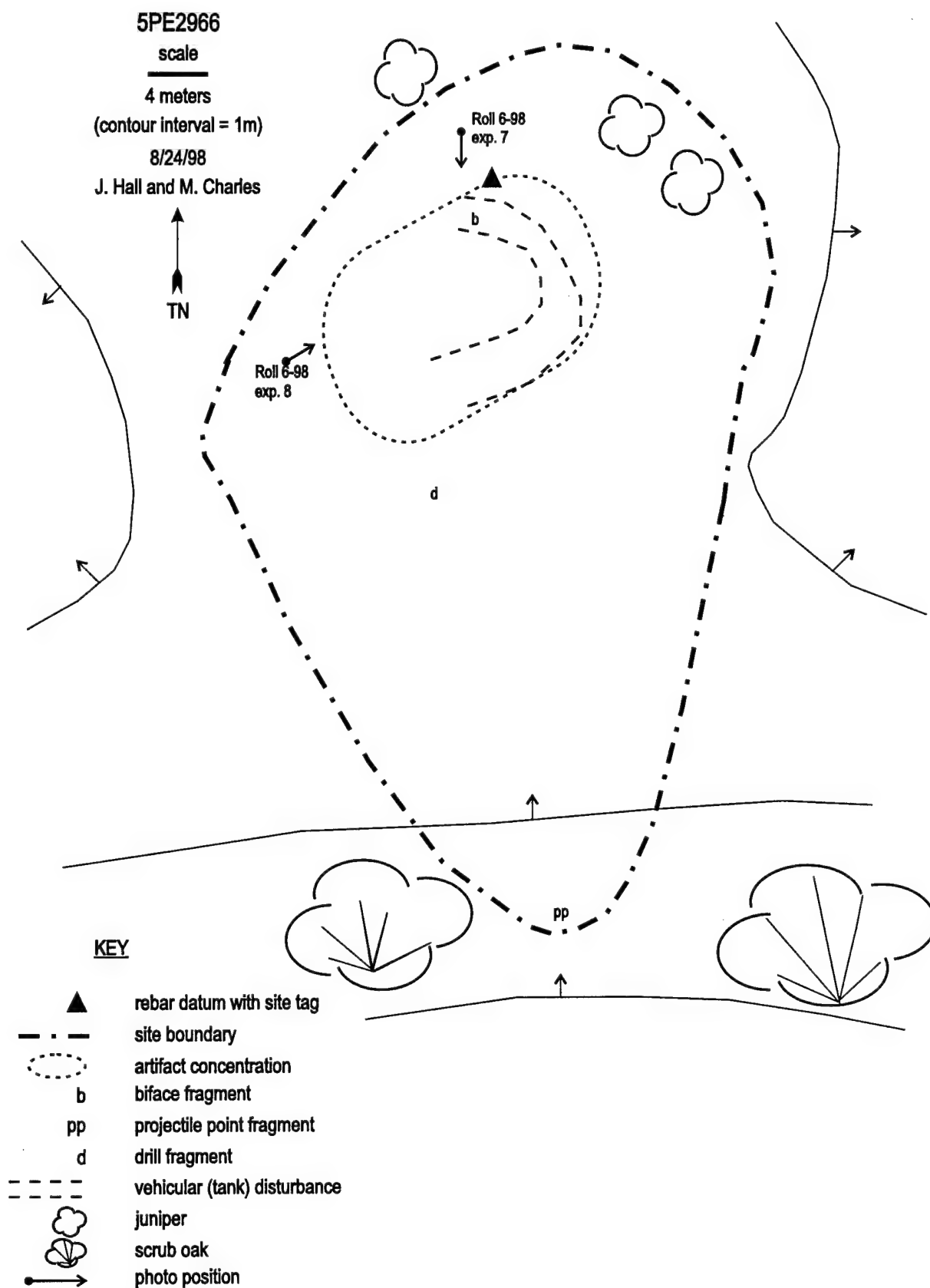


Figure III.84. Site Map, 5PE2966.

Table III.63. Flaked-lithic Debitage, 5PE2966.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			14	18	5	1				38 (71.7%)
1/4"-1/2"			2	12	1					15 (28.3%)
<1/4"										
Total (%)			16 (30.2%)	30 (56.6%)	6 (11.3%)	1 (1.9%)				53 (100%)
Flake Type										
Shatter				7	1	1				9 (17%)
Simple			11	16	2					29 (54.7%)
Complex			5	7	3					15 (28.3%)
Bifacial Thinning										
Total (%)			16 (30.2%)	30 (56.6%)	6 (11.3%)	1 (1.9%)				53 (100%)
Cortex										
Present			8	6	3					17 (32.1%)
Absent			8	24	3	1				36 (67.9%)
Total (%)			16 (30.2%)	30 (56.6%)	6 (11.3%)	1 (1.9%)				53 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			14	8	1					23 (43.4%)
Broken			1	9	4					14 (26.4%)
Flake Fragment			1	6						7 (13.2%)
Debris				7	1	1				9 (17%)
Total (%)			16 (30.2%)	30 (56.6%)	6 (11.3%)	1 (1.9%)				53 (100%)

Similarly, Sullivan and Rosen's (1985) system identifies a greater emphasis on core reduction activities although tool manufacturing activities are also indicated. The site may date to the Late Archaic to Early Ceramic periods (1500 BC-AD 200) as suggested by the projectile point fragment.

Statement of Significance: The topographic situation at the site allowing for sediment buildup, the number of artifacts, and the diversity of artifacts on the surface suggests the possibility for intact buried deposits. The site has the potential to yield information important to prehistoric research, specifically with regard to the themes of prehistoric economies, settlement patterns, and chronology and cultural relationships as outlined in the CRMP (Zier et al. 1987).

Management Recommendation: Avoid and Test. The site is actively being impacted by military maneuvers. Subsurface excavations are necessary to determine if intact deposits are present and the eligibility recommendation is justified.

5PE2967

Site Type: Prehistoric Sheltered Site

Elevation: 5880 ft (1792 m) asl

Aspect: 140 ° Slope: 25 °

Site Dimensions: 10 m N/S x 4 m E/W

This site is located at the base of a 16 m tall cliff face where a rock overhang creates a small rock shelter (Figures III.85 and III.86) that overlooks Red Creek to the east to southeast. The shelter is in a pinon and juniper woodland with skunkbush and cholla, while a grassy river valley is located east of the site. A probe with a pinflag indicates that sediments within the shelter are at least 85 cm deep. The shelter contains adequate soil deposition to contain buried features and artifacts. There is some evidence of military presence in the form of a small amount of trash and lightly carved initials "JT" on the shelter wall.

The ceiling in the middle of the shelter is low and has the appearance of connecting two areas of the shelter that are one meter high. A trowel probe recovered a small amount (not collected) of charcoal at a depth of 22 cm. The test was halted at a depth of 30 cm due to unstable sand that filled the hole as it was excavated. No artifacts were recovered from this test.

An orthoquartzite flake was found in the shelter near the trowel test. A partially exfoliated boulder metate is located in the front of the shelter. A metate fragment was found resting on the boulder metate and appears to have been moved there recently. The site lacked information that would reveal cultural affiliation or period. The flake and the metates indicate at least short-term prehistoric occupation. The presence of the boulder metate suggests that the shelter was used in food processing.

Statement of Significance: The shelter may contain undisturbed cultural deposits based on the presence of charcoal in a trowel test and the apparent depth of sediments within the shelter. The site has the potential for further research on the themes of chronology and cultural relationships, settlement patterns, prehistoric economies, and paleoclimates as outlined in Zier et al. 1997 (CRMP).

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine if intact buried deposits are present and that the eligibility recommendation is justified.

5PE2968

Site Type: Prehistoric Open Occupation Hearth Site

Elevation: 5780 ft (1762 m) asl

Aspect: 145 ° Slope: 1-10 °

Site Dimensions: 28 m N/S x 28 m E/W

This site consists of a hearth and a scatter of flaked-lithic and ground stone artifacts. It is located on a small

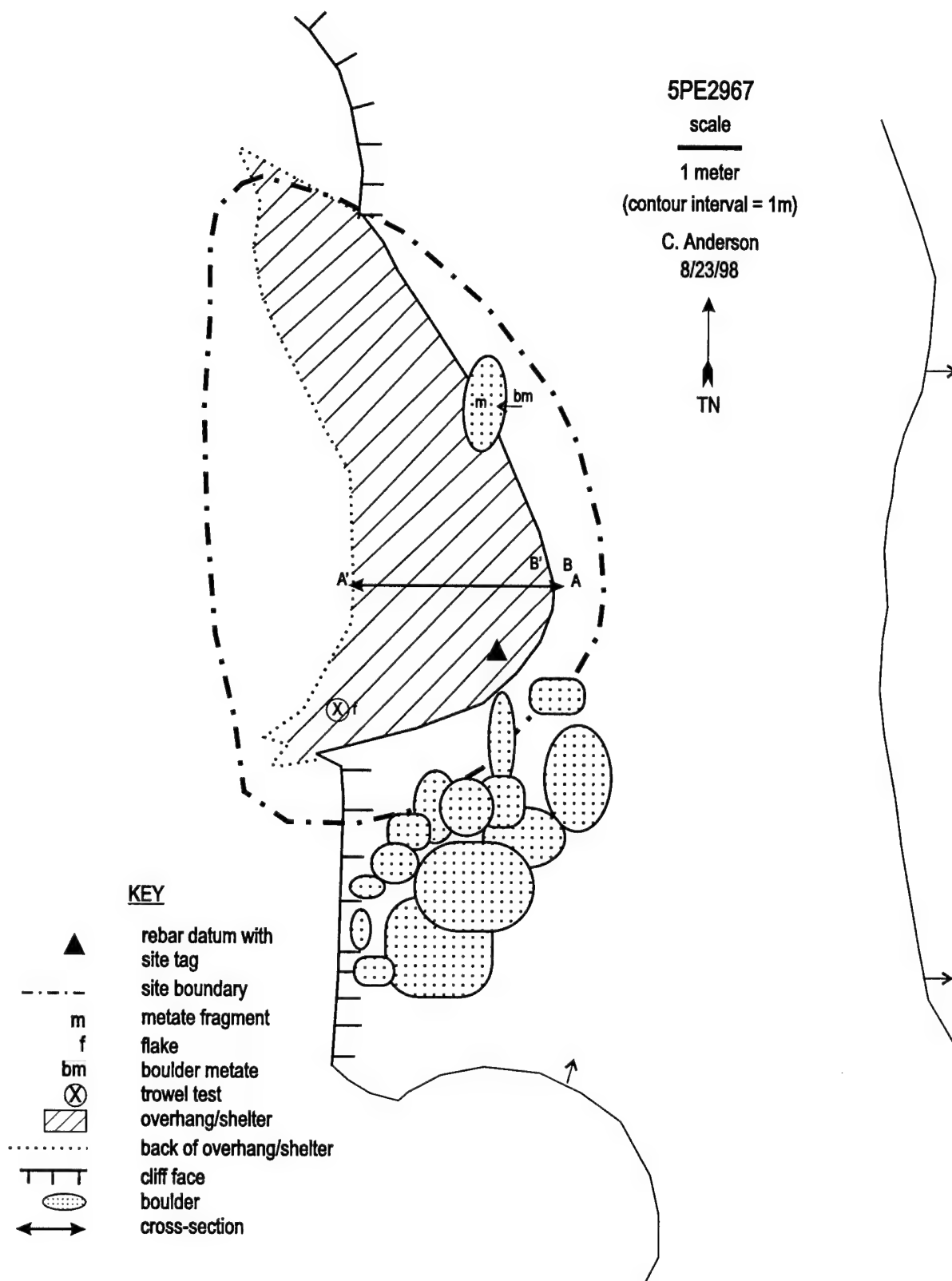


Figure III.85. Site Map, 5PE2967.

5PE2967
Cross-section
scale
1 meter
C. Anderson
8/23/98

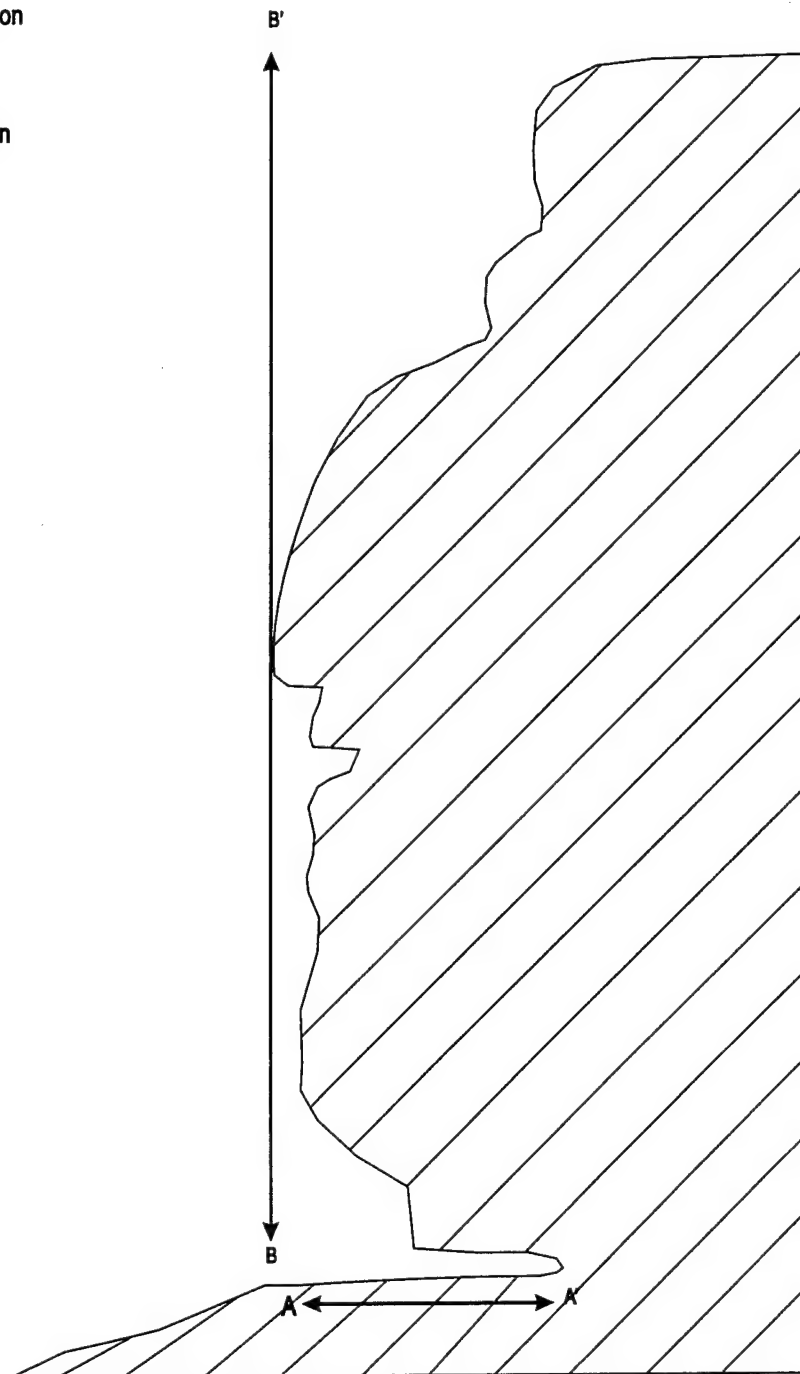


Figure III.86. Cross-section Map, 5PE2967.

easterly-extending ridge overlooking a major tributary of Red Creek (Figure III.87). The ridge is bounded on the north and the south by smaller side drainages that flow into a larger tributary. The east edge of the site slopes toward the larger tributary. Vegetation in the area includes grasses, juniper, and prickly pear cactus, with denser woodland in the drainage. The bank profile of the drainage has over a meter of deposition with the potential for at least shallow cultural deposits. Small pieces of animal bone are exposed in the profile but do not appear to have been culturally altered. The soil is gravelly brown silt. The feature has been impacted by vehicular traffic, and the extent of the subsurface damage is not known at this time.

The probable hearth consists of fifteen fire-reddened pieces of tabular sandstone that is located along the berm of a vehicle track. The feature is directly associated with two manos. Small pieces of animal bone were noted on the surface in the vicinity of the hearth. A trowel test next to the hearth indicated that at least one larger piece of fire reddened sandstone extends 8 cm below the surface. No charcoal or artifacts were present in the trowel test.

Thirty-six artifacts were observed and include one projectile point (collected), two manos, one quartzite core fragment and thirty-two flakes (Table III.64). Local lithic raw material types were utilized. The inferred activities at the site may have include temporary habitation or camping, as suggested by the hearth and manos. Tool manufacturing may have been the dominant activity, although there is also some evidence for core reduction, which includes the presence of a core fragment. The slightly higher number of smaller flakes and the number of complex flakes may represent latter stages of reduction (Ahler and Smail 1999). The Sullivan and Rosen (1985) system, on the other hand, suggests more of an emphasis on tool manufacturing, although core reduction activities are also indicated.

The site possibly dates to the Early to Middle Ceramic periods (AD 700-AD1350). This date is suggested by the presence of a projectile point (Figure 7.4d) similar to Category P52 from the PCMS (Lintz and Anderson 1989: 177).

Statement of Significance: The site is potentially eligible for nomination to the NHRP. Adequate soil deposition exists, with the potential for at least shallow cultural deposits. The site is likely to yield information important to prehistory under the research domains of chronology and cultural relationships, settlement patterns and prehistoric economies as outlined in Zier et al. (1997).

Management Recommendation: Avoid and Test. The site is actively being impacted by military maneuvers. Subsurface excavations are necessary to determine if intact buried deposits are present. The surface data suggests a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified.

5PE2969

Site Type: Prehistoric Sheltered Site

Elevation: 6000 ft (1829) asl

Aspect: 108 ° Slope: 0-5 °

Site Dimensions: 1.75 m E/W x 4 m N/S

This site is a small rock shelter located above and west of a north to south-trending drainage (Figure III.88). A cluster of cottonwoods is located immediately below the shelter but within the drainage. The vegetation in the immediate area consists of mullein, prickly pear cactus, currant, grasses, cholla, pinon, juniper, scrub oak, and cottonwood surrounding the site. Soil deposition within the shelter is greater than 40 cm, and the sediments are a light gray sandy silt. Downed pinon in and around the drainage indicate a recent grass fire. The site has experienced minor slope wash erosion.

No artifacts or features were identified on the surface, but a trowel test yielded one chert flake and a rodent bone at 35 cm below the surface. The flake is a large broken, simple flake lacking cortex. The paucity of artifacts limits the inferences that can be drawn about this site. Cultural affiliation and age remain undetermined because of a lack of temporally diagnostic artifacts.

Statement of significance: The site has the potential to yield information important to prehistory because of the presence of buried cultural material within the shelter. Further testing is necessary to determine the integrity and extent of cultural

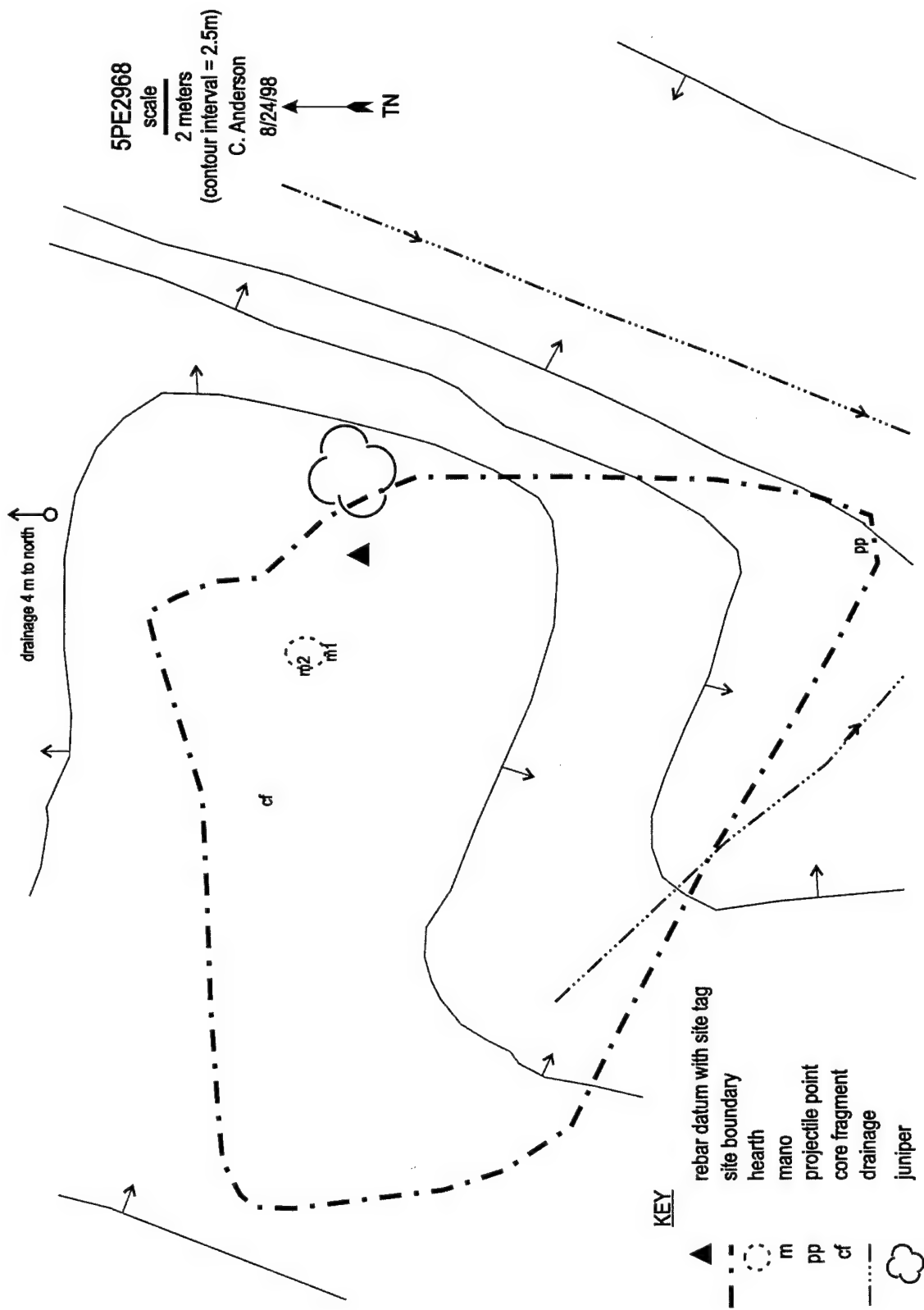


Figure III.87. Site Map, 5PE2968.

Table III.64. Flaked-lithic Debitage, 5PE2968.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		2		8	2		3			15 (46.9%)
1/4"-1/2"		1		8	1		3			13 (40.6%)
<1/4"				3			1			4 (12.5%)
Total (%)		3 (9.4%)		19 (59.4%)	3 (9.4%)		7 (21.8%)			32 (100%)
Flake Type										
Shatter				7						7 (21.9%)
Simple		1		6	1		4			12 (37.5%)
Complex		2		6	2		3			13 (40.6%)
Bifacial Thinning										
Total (%)		3 (9.4%)		19 (59.4%)	3 (9.4%)		7 (21.8%)			32 (100%)
Cortex										
Present		3		8	2		2			15 (46.9%)
Absent				11	1		5			17 (53.1%)
Total (%)		3 (9.4%)		19 (59.4%)	3 (9.4%)		7 (21.8%)			32 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1		1	1		1			4 (12.5%)
Broken		1		6	1		2			10 (31.2%)
Flake Fragment		1		5	1		4			11 (34.4%)
Debris				7						7 (21.9%)
Total (%)		3 (9.4%)		19 (59.4%)	3 (9.4%)		7 (21.8%)			32 (100%)

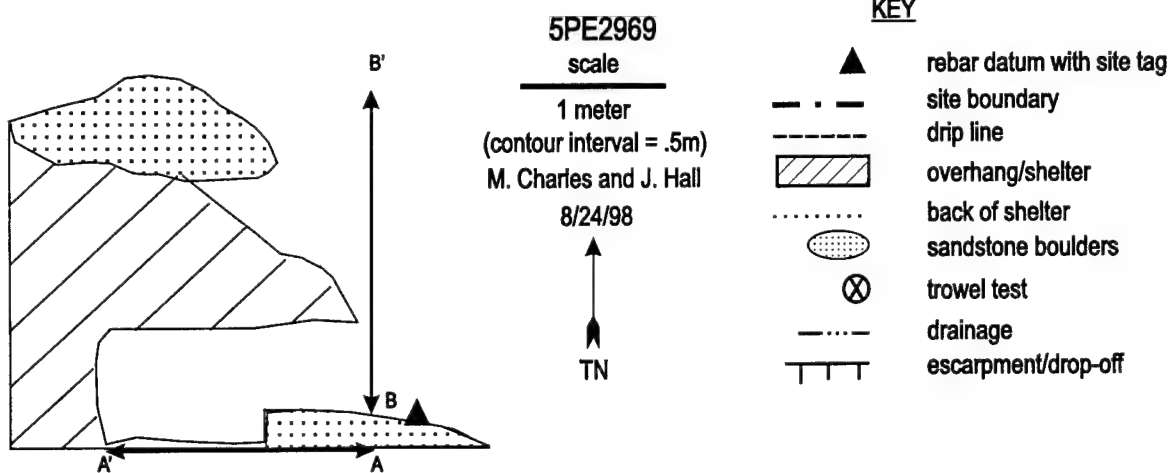
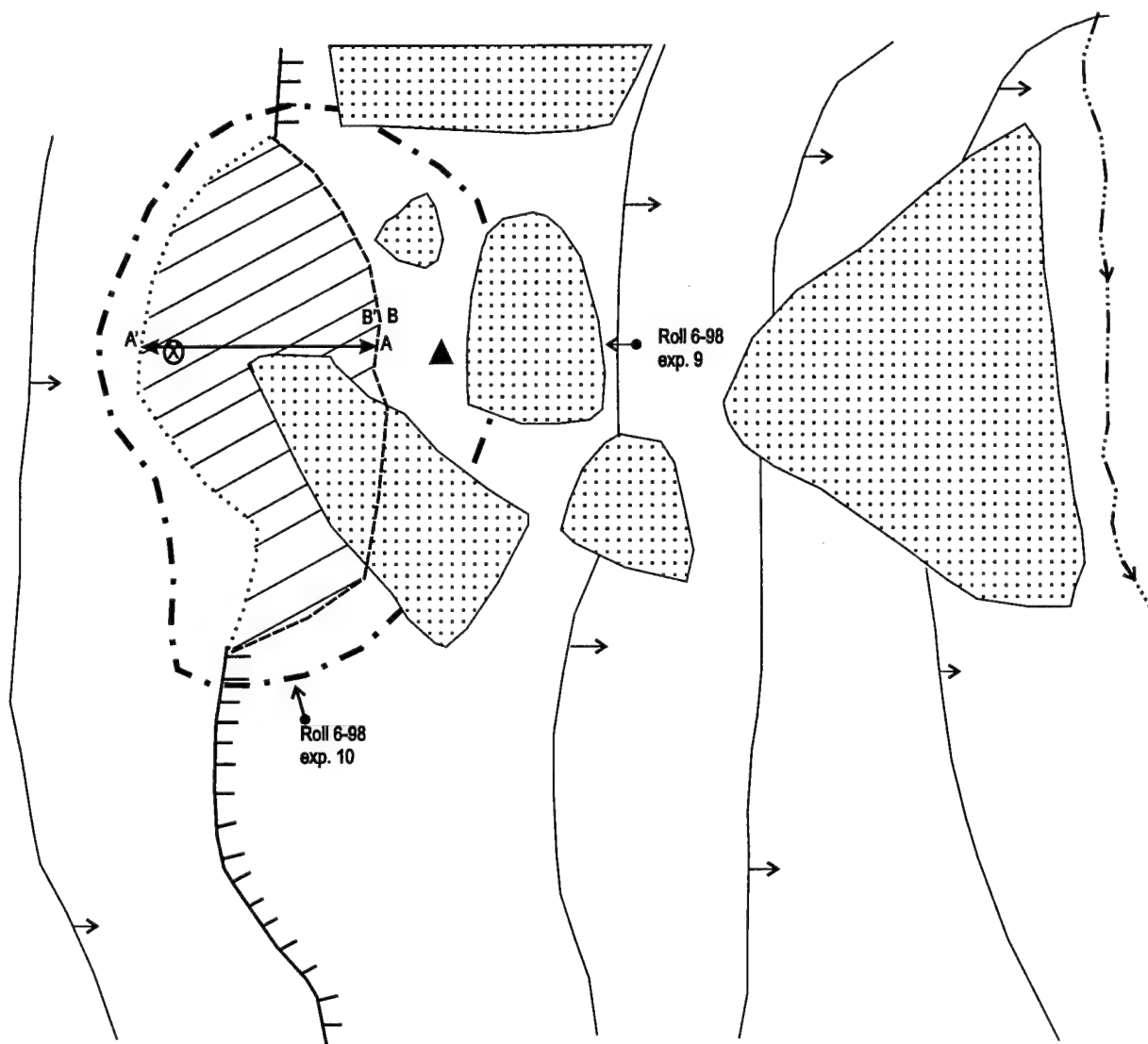


Figure III.88. Site Map, 5PE2969.

deposits. This site may yield significant archeological information on the themes of settlement patterns, prehistoric economies, chronology and cultural relationships, and possibly paleoclimate, as identified in the CRMP (Zier et al. 1997).

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine that intact buried deposits are present. The subsurface data suggests a potential for buried deposits. Testing is being recommended to determine if the eligibility recommendation is justified.

5PE2970

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5820 ft (1774 m) asl

Aspect: 150° Slope: 3°

Site Dimensions: 24 m N/S x 5.5 m E/W

This site is a linear scatter of flaked-lithic artifacts located along the west side of a broad shallow ephemeral drainage on top of a westerly-extending ridge (Figure III.89). Vegetation on the site includes pinon, juniper and cholla with grasses on the surrounding ridges. Gravels and sandstone bedrock are exposed on the surface of the site. The sediments are a shallow (<10 cm) brown silty gravel, and offer little potential for subsurface deposits. A lightly used tank road runs just to the north of the site, and a drainage runs parallel to the site to the east.

Artifacts have been displaced through sheet wash. No artifacts were observed in higher areas to the east and west, which suggests that artifacts did not wash down to the drainage from this area. One chert biface fragment, one chert retouched flake, one chert scraper, and eighteen flakes comprise the artifact assemblage. The tools were collected, and the flakes were analyzed in the field (Table III.65).

The inferred activities at the site are likely related to lithic reduction, although the small number of flakes limits the inferences that can be drawn from the assemblage. Local lithic raw material types were utilized. The relatively high number of small flakes, the number of complex flakes and the number of flakes without cortex suggest that tool manufacturing may have been the primary activity at the site. Owing to a lack of temporally diagnostic artifacts, the cultural affiliation and age are undetermined.

Statement of Significance: The site has limited research potential based on the lack of significant soil deposition, the small number of artifacts, and the disturbance to the site. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2971

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6040 ft (1841 m) asl

Aspect: 54° Slope: 2°

Site Dimensions: 23 m N/S x 41 m E/W

This site is of a sparse flaked-lithic artifact scatter on a gentle eastward slope south of Wild Mountain, and north and west of Red Creek (Figure III.90). Vegetation is characterized by short and tall prairie grasses, sage brush, snakeweed, sunflower, prickly pear cactus, cholla, mullein, and gumweed. The sediments on the site are a gravelly sandy loam with a depth of less than 30 cm. Light to moderate military disturbance is apparent with a modern stone and branch "foxhole" structure northwest of the site about 24 m from the datum.

The only artifacts observed at the site were nine flakes (Table III.66). The small number of artifacts limits the inferences that can be drawn from the site. Core reduction is the inferred activity at the site, and this inference is based on the number of complete flakes and the large size of most of them. Local lithic raw material types were utilized.

Statement of Significance: The site has little potential to yield further information, due to the shallow sediment and the

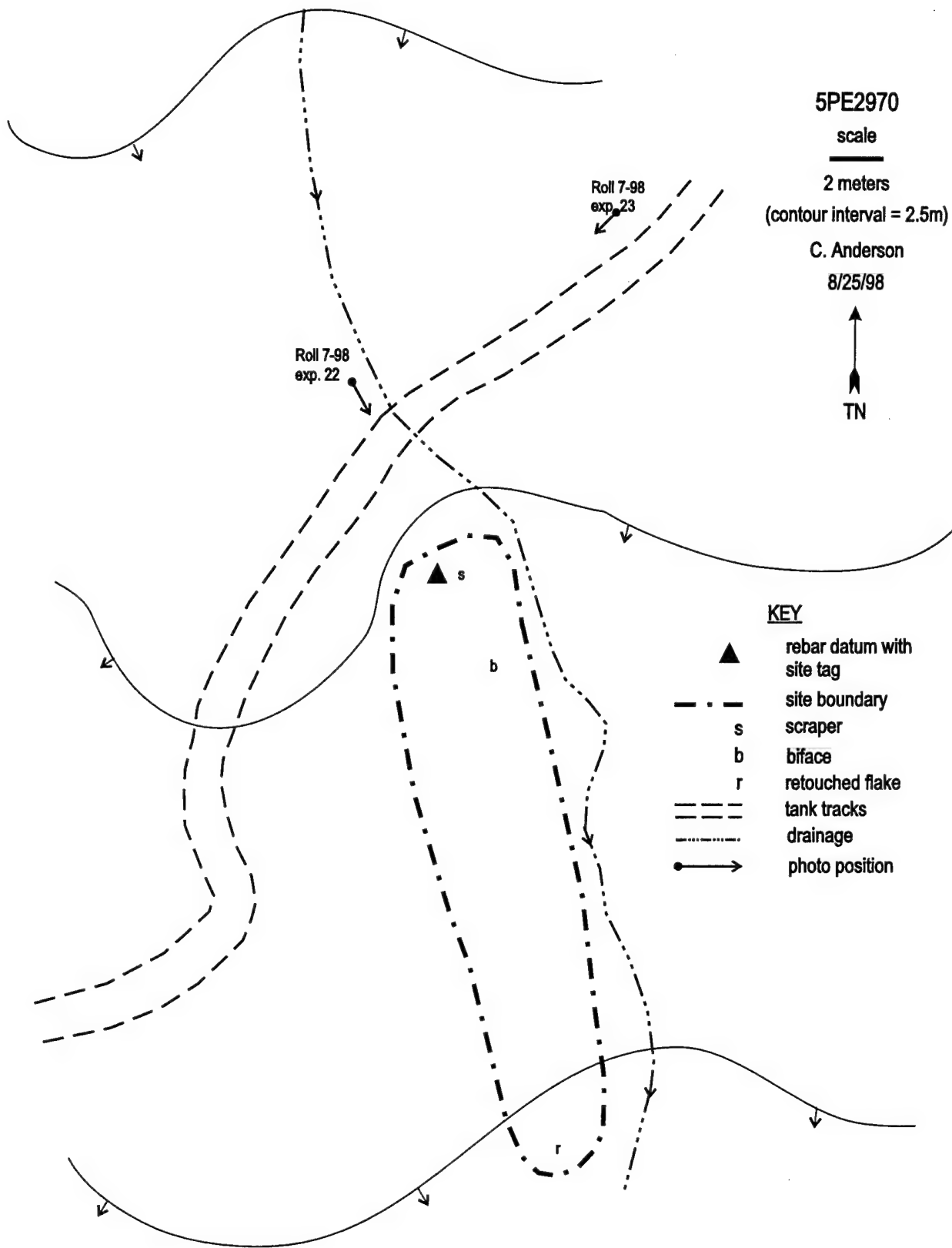


Figure III.89. Site Map, 5PE2970.

Table III.65. Flaked-lithic Debitage, 5PE2970.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"		3		6						9 (50%)
1/4"-1/2"				5	1					6 (33.3%)
<1/4"				3						3 (16.7%)
Total (%)		3 (16.7%)		14 (77.8%)	1 (5.5%)					18 (100%)
Flake Type										
Shatter				2						2 (11.1%)
Simple		2								2 (11.1%)
Complex		1		12	1					14 (77.8%)
Bifacial Thinning										
Total (%)		3 (16.7%)		14 (77.8%)	1 (5.5%)					18 (100%)
Cortex										
Present		3		8	1					12 (66.7%)
Absent				6						6 (33.3%)
Total (%)		3 (16.7%)		14 (77.8%)	1 (5.5%)					18 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		2		6						8 (44.45%)
Broken		1		6	1					8 (44.45%)
Flake Fragment										
Debris				2						2 (11.1%)
Total (%)		3 (16.7%)		14 (77.8%)	1 (5.5%)					18 (100%)

5PE2971

scale

4 meters

(contour interval = .5m)

C. Markussen, J. Hall, and M. Charles

8/25/98



TN

KEY



rebar datum with site tag



site boundary



army structure



juniper



photo position

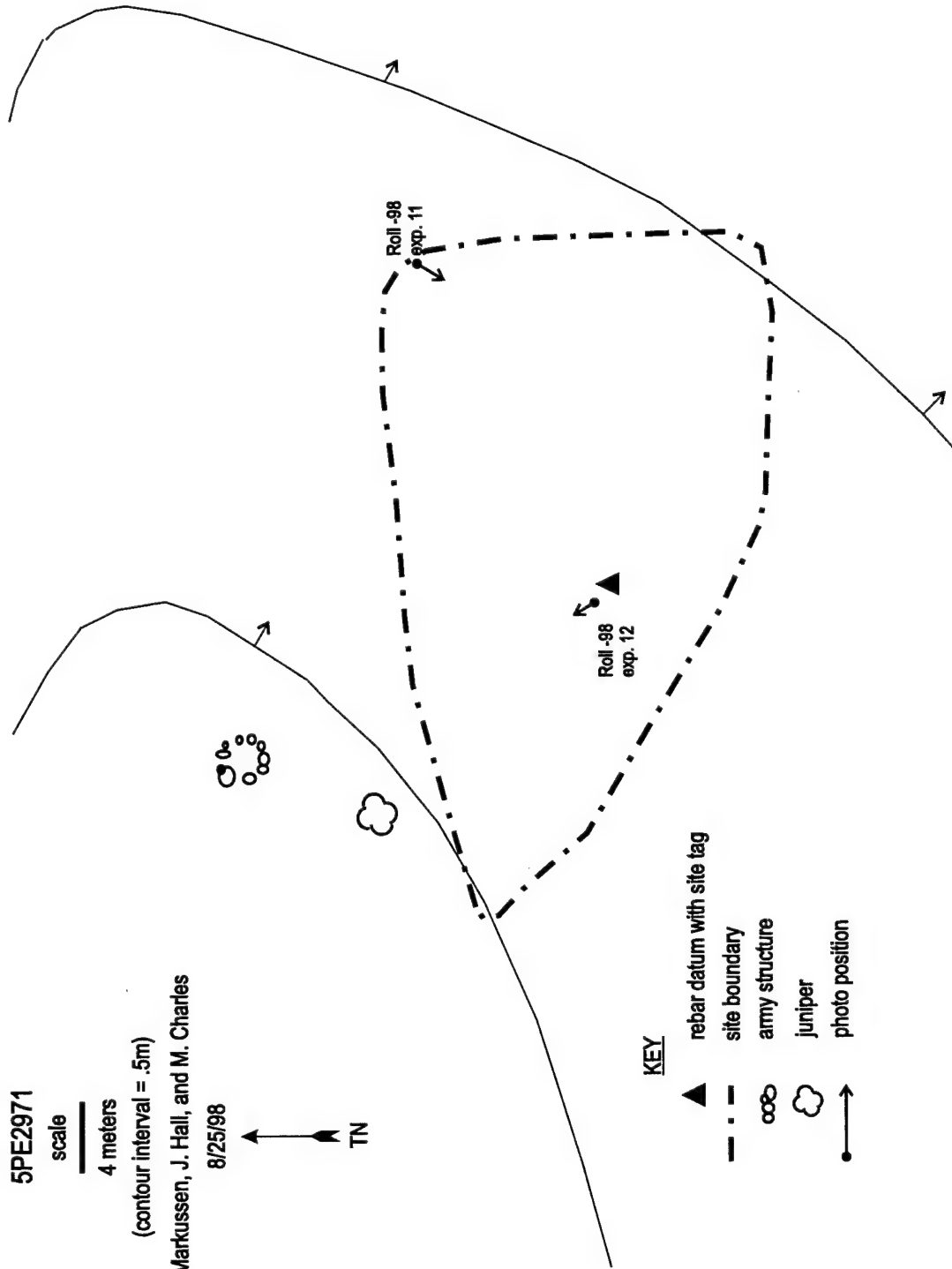


Figure III.90. Site Map, 5PE2971.

Table III.66. Flaked-lithic Debitage, 5PE2971.

Material Type									
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone	Total (%)
Size									
>1/2"			1	6					7 (77.8%)
1/4"-1/2"				1	1				2 (22.2%)
<1/4"									
Total (%)			1 (11.1%)	7 (77.8%)	1 (11.1%)				9 (100%)
Flake Type									
Shatter									
Simple			1	1					2 (22.2%)
Complex				6	1				7 (77.7%)
Bifacial Thinning									
Total (%)			1 (11.1%)	7 (77.8%)	1 (11.1%)				9 (100%)
Cortex									
Present									
Absent			1	7	1				9 (100%)
Total (%)			1 (11.1%)	7 (77.8%)	1 (11.1%)				9 (100%)
Flake Type (Sullivan and Rosen 1985)									
Complete			1	4					5 (55.6%)
Broken				2					2 (22.2%)
Flake Fragment				1	1				2 (22.2%)
Debris									
Total (%)			1 (11.1%)	7 (77.8%)	1 (11.1%)				9 (100%)

small artifact assemblage. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2972

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5940 ft (1811 m) asl

Aspect: 145 ° Slope: 1-6 °

Site Dimensions: 40 m N/S x 15 m E/W

This site is a light scatter of flaked-lithic artifacts located on a narrow bench on the west side of a tributary canyon of Red Creek (Figure III.91). The bench lies roughly north/south and is about half-way up the slope. It is hidden from the bottom by huge sandstone boulders that have broken away from the cliff. Vegetation on the site includes pinon, juniper, short prairie grasses and prickly pear cactus with an occasional ponderosa pine. The sediments are a light brown, gravelly sandy loam that is at least 30 cm deep. The site is lightly disturbed through slope wash erosion.

A concentration of axe-cut logs (juniper) was mapped, but its association with the site remains unclear. The concentration may represent a stock-pile of cut fence posts; although, at present, there is no fence line in the immediate site vicinity. Another, more remote possibility is that they represent the remains of a temporary modern shelter.

Artifacts consist of twenty-five flakes (Table III.67), and one core fragment. The core fragment is orthoquartzite. Local lithic raw material types were utilized. Limited amounts of both core reduction and tool manufacturing probably took place, but the number of flakes limits the inferences that can be drawn from the assemblage.

Statement of Significance: This site is a scatter of flakes located in an area with little previous investigation. Several sites exist nearby, and the undisturbed nature of the site and the possibility for buried cultural deposits indicate that the site has the potential for further information. The site may yield information on the research domains of settlement patterns, prehistoric economies, and chronology and cultural relationships, as defined in the CRMP (Zier et al.1997).

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine that intact buried deposits are present. The surface data suggests a potential for buried deposits. Testing is being recommended to determined if the eligibility recommendation is justified.

5PE2973

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5810 ft (1771 m) asl

Aspect: 194 ° S Slope: 0 °

Site Dimensions: 22 m E/W x 32 m N/S

This site is a sparse flaked-lithic artifact scatter located on the northwest corner of a westerly-extending ridge (Figure III.92), that is adjacent to an intermittent drainage. Bedrock is exposed along the edge of the ridge, which is broad and fairly flat. A steep dropoff is to the north, but the slope is more gradual to the west. The site overlooks the eastward bend of a larger tributary of Red Creek. The vegetation in the immediate area includes pinon, juniper, grasses, and prickly pear cactus. The surface is covered with small sandstone gravels in a brown, gravelly silt. The site has little potential for buried materials since the soil is shallow (5-15 cm). The site has been noticeably impacted by military vehicles.

A total of eighteen artifacts was observed. All artifacts were analyzed in the field. Local raw material types were utilized. The small number of flakes (Table III.68) limits the inferences that can be drawn from the assemblage, although it is suggested that limited amounts of both core reduction and tool manufacturing were carried out at the site. Cultural affiliation and age is undetermined due to the absence of temporally diagnostic artifacts.

Statement of Significance: The small number of artifacts and the shallow soil deposition indicate that the site has little

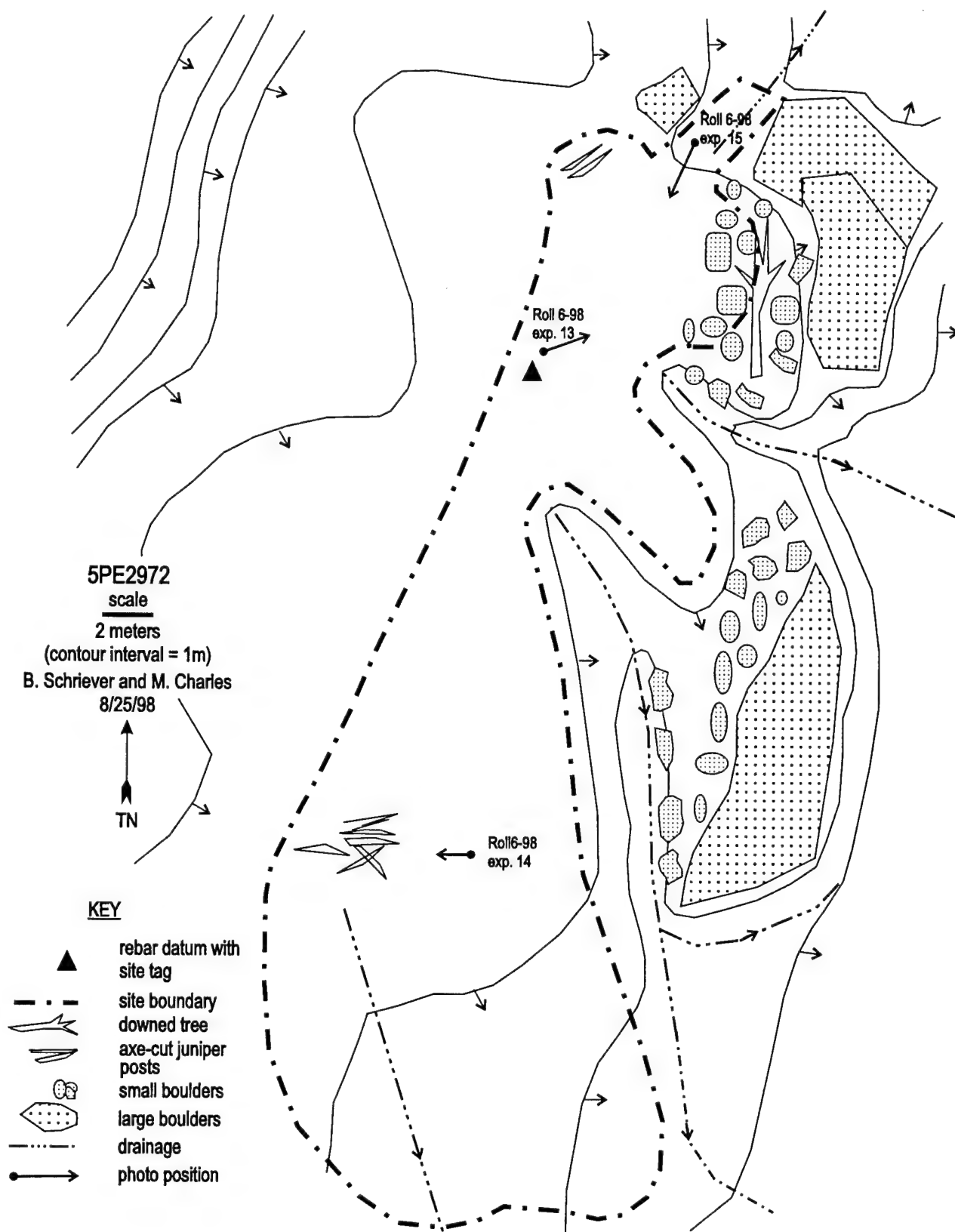


Figure III.91. Site Map, 5PE2972.

Table III.67. Flaked-lithic Debitage, 5PE2972.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			11	8						19 (76%)
1/4"-1/2"			1	4						5 (20%)
<1/4"				1						1 (4%)
Total (%)			12 (48%)	13 (52%)						25 (100%)
Flake Type										
Shatter			4	7						11 (44%)
Simple			6	3						9 (36%)
Complex			2	3						5 (20%)
Bifacial Thinning										
Total (%)			12 (48%)	13 (52%)						25 (100%)
Cortex										
Present				2						2 (8%)
Absent			12	11						23 (92%)
Total (%)			12 (48%)	13 (52%)						25 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			1	1						2 (8%)
Broken			6	4						10 (40%)
Flake Fragment			1	1						2 (8%)
Debris			4	7						11 (44%)
Total (%)			12 (48%)	13 (52%)						25 (100%)

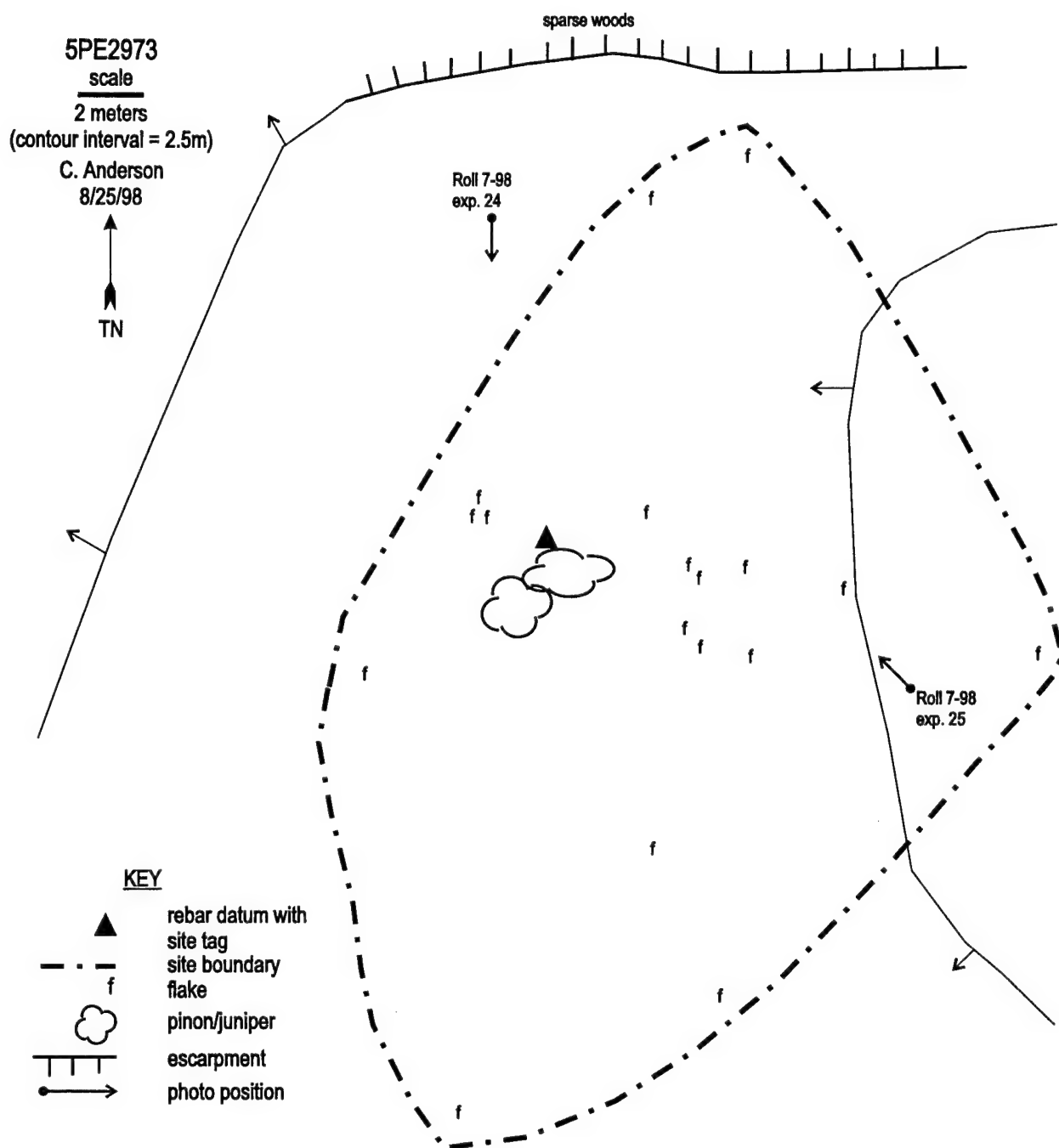


Figure III.92. Site Map, 5PE2973.

Table III.68. Flaked-lithic Debitage, 5PE2973.

Material Type								Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone
Size								
>1/2"				10	1			11 (61.1%)
1/4"-1/2"			1	6				7 (38.9%)
<1/4"								
Total (%)			1 (5.6%)	16 (88.9%)	1 (5.6%)			18 (100%)
Flake Type								
Shatter				2				2 (11.1%)
Simple			1	1				2 (11.1%)
Complex				13	1			14 (77.8%)
Bifacial Thinning								
Total (%)			1 (5.6%)	16 (88.9%)	1 (5.6%)			18 (100%)
Cortex								
Present			1	11	1			13 (72.2%)
Absent				5				5 (27.8%)
Total (%)			1 (5.6%)	16 (88.9%)	1 (5.6%)			18 (100%)
Flake Type (Sullivan and Rosen 1985)								
Complete				10				10 (55.6%)
Broken				3	1			4 (22.2%)
Flake Fragment			1	1				2 (11.1%)
Debris				2				2 (11.1%)
Total (%)			1 (5.6%)	16 (88.9%)	1 (5.6%)			18 (100%)

research potential. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2974

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5920 ft (1804 m) asl

Aspect: 176 ° S Slope: 5 °

Site Dimensions: 19 m N/S x 8 m E/W

This site is a sparse flaked-lithic artifact scatter on a narrow, northwest/southeast-trending bench on the east side of a tributary drainage of Red Creek (Figure III.93). The site is bounded to the east by a 12 m high cliff. Along the west edge of the site, a line of boulders surrounds a flat sandy open area. The slope increases west of the boulders, and a very large boulder 20 x 30 m, is just north of the site. The vegetation on the site is pinon, juniper, mullein, gooseberry, pioneer species composite, and cholla. Although the sediments are substantial (>40 cm), there is no evidence of subsurface deposits, and the site is probably limited to the surface. The soils are a light brown sand to sandy loam. The site is affected by light to moderate slope wash.

A total of thirteen flakes was located (Table III.69). The inferred activity on the site is lithic reduction of local raw materials. The small number of flakes limits further inferences from being drawn from the assemblage. The cultural affiliation and age of the site are undetermined.

Statement of Significance: The site has limited research potential based on the small number of artifacts and low potential for buried materials. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2975

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5950 ft (1814 m) asl

Aspect: 160 ° Slope: 3 °

Site Dimensions: 32 m NW/SE x 13 m NE/SW

This site is a sparse flaked-lithic scatter located in a flat, heavily wooded area approximately 70 m due west of the canyon rim on top of a tableland (Figure III.94). A north/south tank trail is on the west edge of the site. The vegetation in and around the site consists of pinon, juniper, prickly pear cactus, cholla cactus, and grasses. The soils are a brown gravelly silt, and are thin (10 cm). Gravels are exposed at the surface.

A total of nine artifacts was identified, including one chalcedony projectile point, two chert scrapers and six chert flakes. The tools were collected, and the flakes were analyzed in the field (Table III.70). Local raw material types were utilized. The small number of flakes limits the inferences that can be drawn from the assemblage. The site probably functioned as a temporary camp where the activities included lithic reduction, food or hide processing, and hunting. The projectile point (Figure 7.4e) is similar to Category P69 (Lintz and Anderson 1989:203) and possibly dates, therefore, to the Middle Ceramic to Late Prehistoric periods (AD 950-AD1750).

Statement of Significance: This site lacks the potential for further information based on the small number of artifacts and the lack of significant soil deposition. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

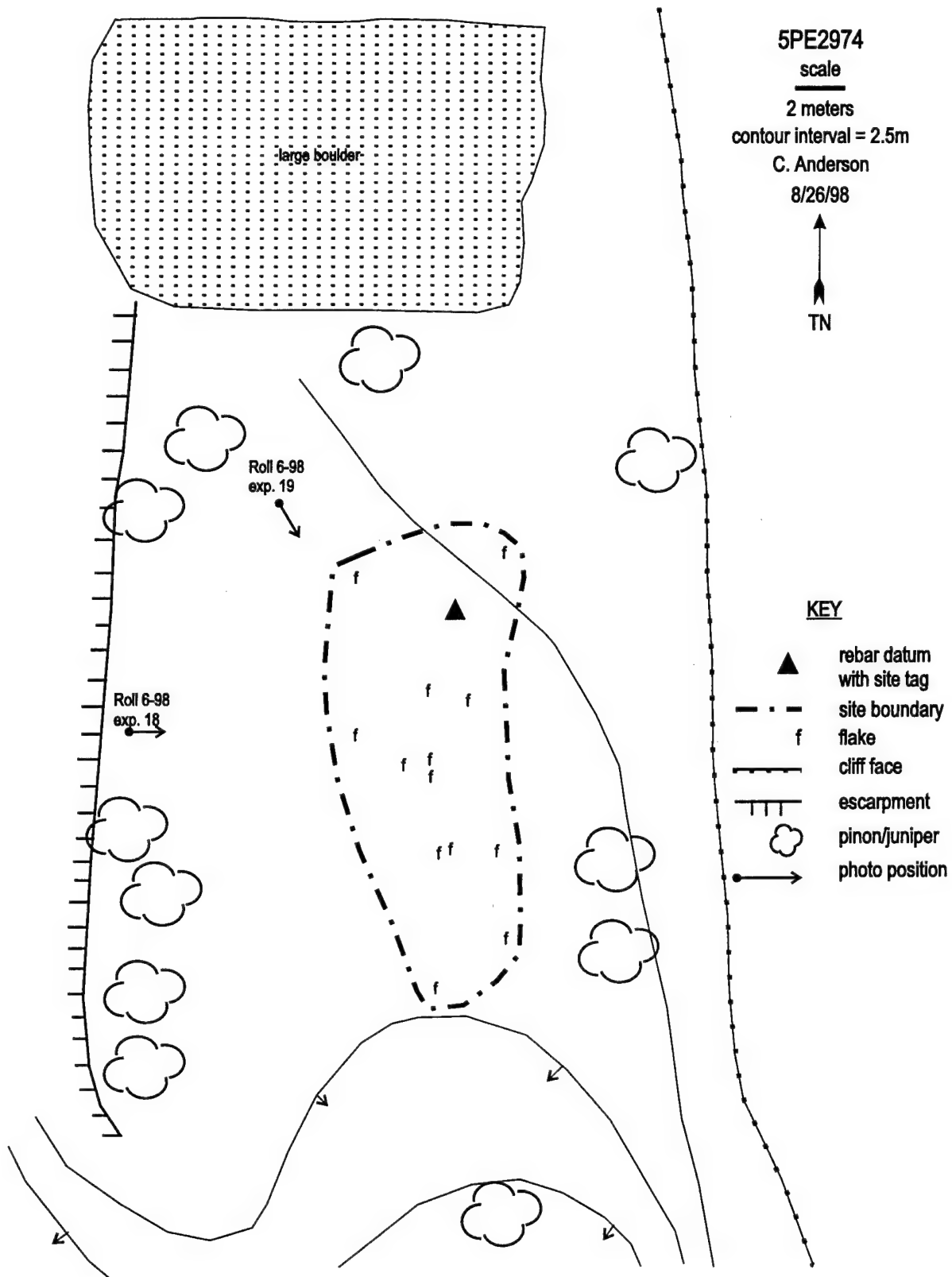


Figure III.93. Site Map, 5PE2974.

Table III.69. Flaked-lithic Debitage, 5PE2974.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"				4	1		1			6 (46.15%)
1/4"-1/2"				6						6 (46.15%)
<1/4"				1						1 (7.7%)
Total (%)				11 (84.6%)	1 (7.7%)		1 (7.7%)			13 (100%)
Flake Type										
Shatter				6			1			7 (53.8%)
Simple				4	1					5 (38.5%)
Complex				1						1 (7.7%)
Bifacial Thinning										
Total (%)				11 (84.6%)	1 (7.7%)		1 (7.7%)			13 (100%)
Cortex										
Present				5	1		1			7 (53.8%)
Absent				6						6 (38.5%)
Total (%)				11 (84.6%)	1 (7.7%)		1 (7.7%)			13 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete				1						1 (7.7%)
Broken				2	1					3 (23.1%)
Flake Fragment				2						2 (15.4%)
Debris				6						7 (53.8%)
Total (%)				11 (84.6%)	1 (7.7%)		1 (7.7%)			13 (100%)

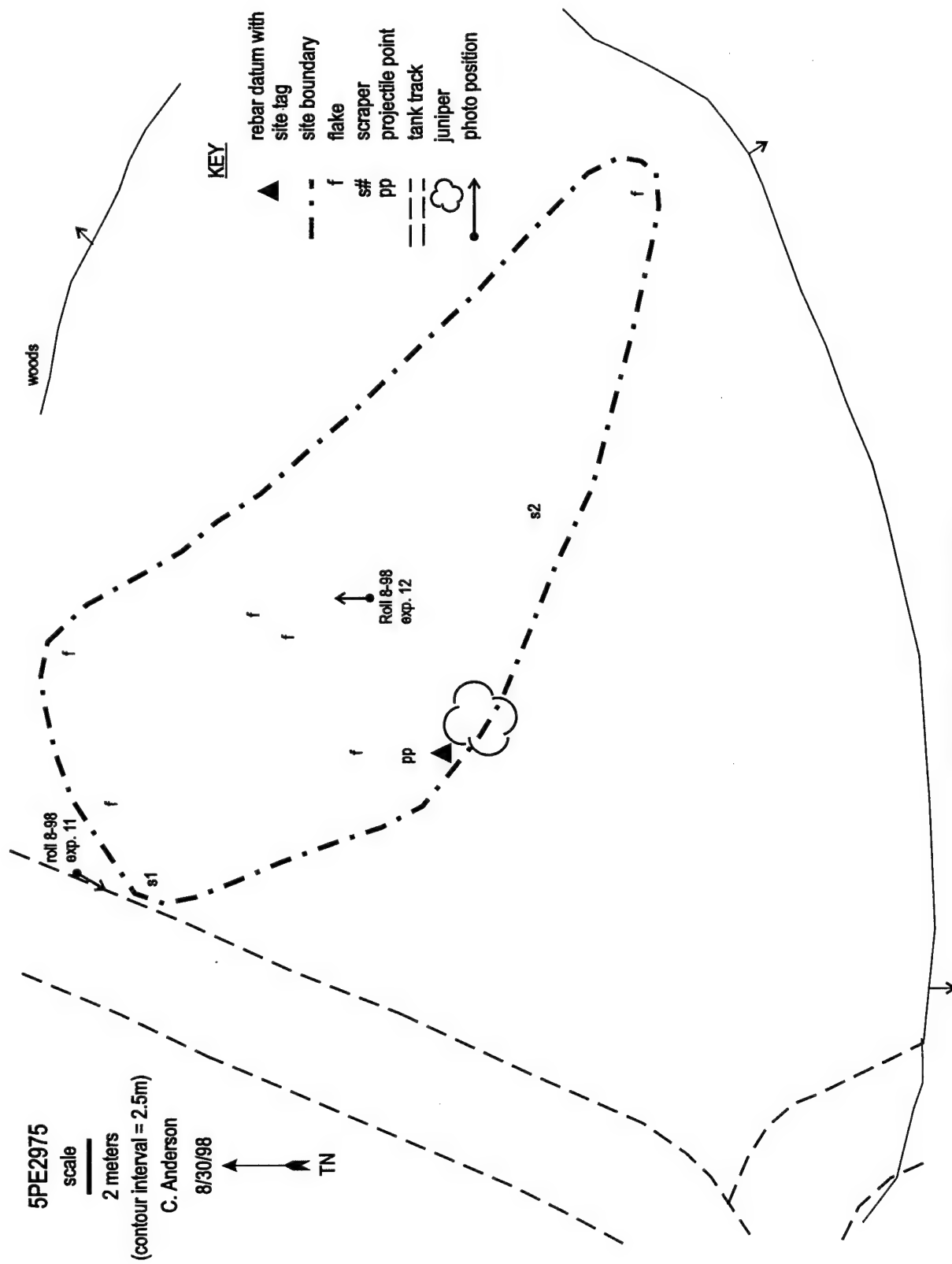


Figure III.94. Site Map, 5PE2975.

Table III.70. Flaked-lithic Debitage, 5PE2975.

Material Type								Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone
Size								
>1/2"								
1/4"-1/2"				5				5 (83.3%)
<1/4"				1				1 (16.7%)
Total (%)				6 (100%)				6 (100%)
Flake Type								
Shatter								
Simple				3				3 (50%)
Complex				3				3 (50%)
Bifacial Thinning								
Total (%)				6 (100%)				6 (100%)
CorTEX								
Present				4				4 (66.7%)
Absent				2				2 (33.3%)
Total (%)				6 (100%)				6 (100%)
Flake Type (Sullivan and Rosen 1985)								
Complete				1				1 (16.7%)
Broken				4				4 (66.7%)
Flake Fragment				1				1 (16.7%)
Debris								
Total (%)				6 (100%)				6 (100%)

5PE2977

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5860 ft (1786 m) asl

Aspect: 190 ° Slope: 2-10 °

Site Dimensions: 42 m N/S x 10 m E/W

This site is located on a slope and bench above a tributary canyon of Red Creek (Figure III.95). The bench is on the west side of the canyon about half-way down from the rim. The vegetation on the site is pinon, juniper, prairie grasses, cholla, sage brush, and

currant. A concentration of flaked-lithic artifacts was found along a thin rocky drainage, while a few flakes were located on the bench where soil depth was more than 50 cm and the soil was a light brown sandy loam. There is adequate soil deposition on the bench for buried cultural deposits, but the majority of artifacts are along the slope. A large rodent backdirt pile was checked for artifacts; none were observed. There is some disturbance from bioturbation and from slope wash.

A quartzite biface was collected, and a total of sixteen flakes was examined in the field (Table III.71). The assemblage consists almost entirely (13) of angular shatter from locally obtained raw materials. Lithic reduction is the probable activity at the site; the small number of flakes limits the inferences that can be drawn from the assemblage. Cultural affiliation and age are undetermined because of the lack of temporally diagnostic artifacts.

Statement of Significance: The site has significant soil deposition; however, the majority of artifacts are located on the slope where soil deposition is slight. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2978

Site Type: Prehistoric Sheltered Site

Name: The Grotto

Elevation: 5800 ft (1768 m) asl

Aspect: 130 ° Slope: 2-5 °

Site Dimensions: 48 m SW/NE x 16 m SE/NW

This site consists of three small rock shelters (Figure III.96) on the west side of an unnamed drainage that flows into Red Creek, and is located on the west side of an unnamed canyon south of Wild Mountain. The site is within a fissure in the sandstone that has been dislodged from the cliff face and shifted downslope several meters. The shelters are approximately 5 m below the top of the cliff edge along both sides of the fissure. The vegetation on the site includes gooseberry, mullein, tall grasses, and juniper. The soil is a sandy loam and deposition is greater than 150 cm. The site exhibits very light disturbance from slope wash and bioturbation.

No artifacts were discovered on the surface and no features or rockart were identified. Shovel tests were placed in two of the shelters, producing charcoal, rodent bones, a polished bone fragment, and four flakes (all shovel test artifacts were collected). The flakes include two pieces of gypsum shatter, one quartzite flake, and one dendritic chert flake. The shovel tests revealed extensive deposition (>150 cm). Artifacts were encountered in Shelter 1 to greater than 70 cm (a charcoal lens was found at 70 cm). A 150 cm deep shovel test in Shelter 2 revealed no artifacts, but charcoal flecks and animal bone were found throughout. Shelter 3 is an overhang with a build-up of roof talus. The overhang is very low to the ground and a shovel test was not placed in this shelter. The site probably represents a locus of prehistoric occupation where the surface artifacts have been covered by sediments. The fissure provides a natural shelter from the elements. It is probable that buried deposits are present beneath the sediment buildup.

Statement of Significance: The site is likely to yield information important to prehistoric research. There are three alcoves within the fissure, one of which was shovel tested and produced cultural deposits to 70 cm. There are two other sites (5PE2977 and 5PE2972) in close proximity to the fissure. There is an excellent probability that the site has the potential to yield significant information on the research themes of paleoclimates, settlement patterns, prehistoric economies, geomorphology, and chronology and cultural relationships as outlined in the CRMP (Zier et al. 1997).

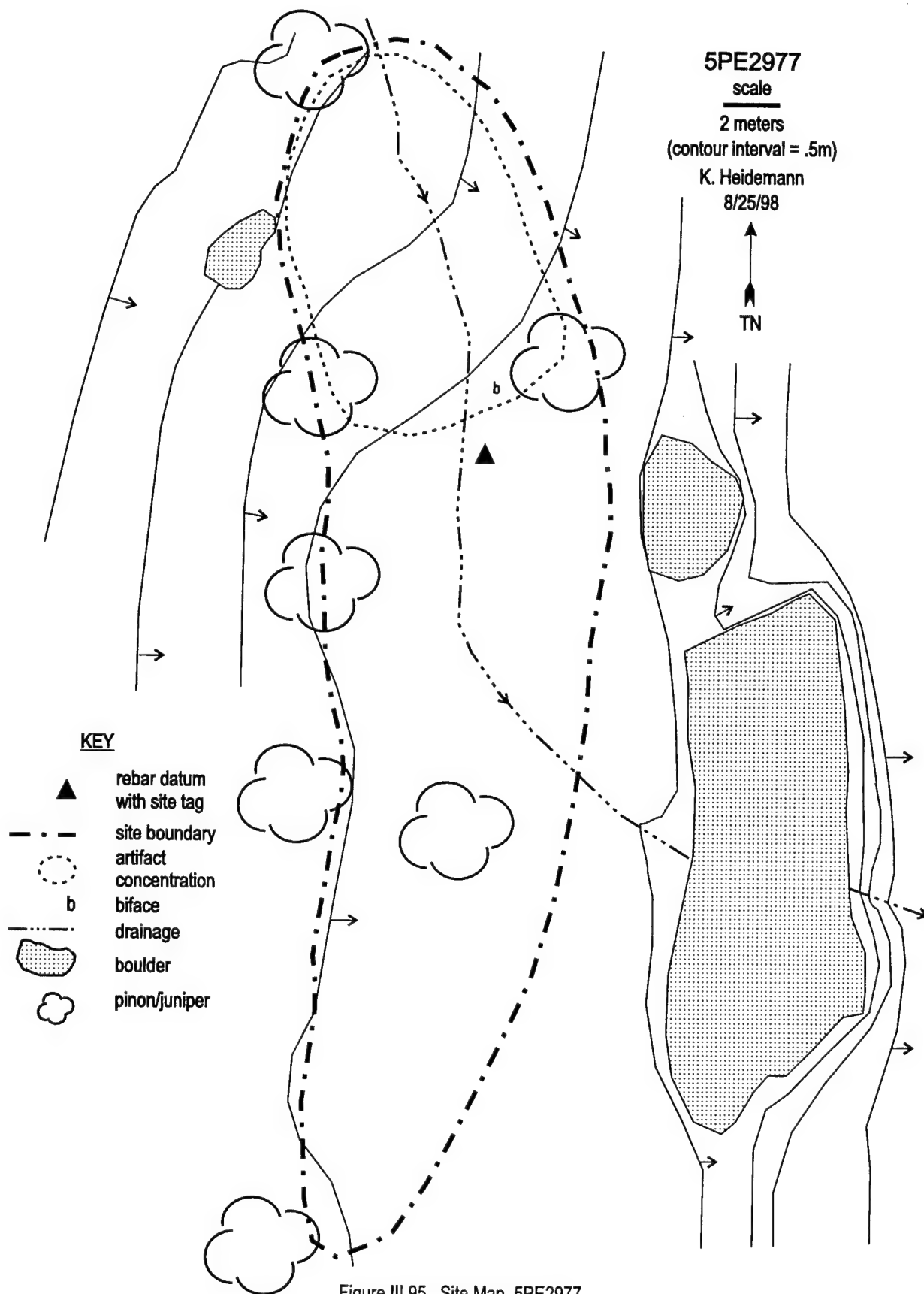


Figure III.95. Site Map, 5PE2977.

Table III.71. Flaked-lithic Debitage, 5PE2977.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			1	8			1			10 (62.5%)
1/4"-1/2"				6						6 (37.5%)
<1/4"										
Total (%)			1 (6.2%)	14 (87.6%)			1 (6.2%)			16 (100%)
Flake Type										
Shatter			1	11			1			13 (81.3%)
Simple				2						2 (12.5%)
Complex				1						1 (6.2%)
Bifacial Thinning										
Total (%)			1 (6.2%)	14 (87.6%)			1 (6.2%)			16 (100%)
Cortex										
Present							1			1 (6.2%)
Absent			1	14						15 (93.8%)
Total (%)			1 (6.2%)	14 (87.6%)			1 (6.2%)			16 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete										
Broken				2						2 (12.5%)
Flake Fragment				1						1 (6.2%)
Debris			1	11			1			13 (81.3%)
Total (%)			1 (6.2%)	14 (87.6%)			1 (6.2%)			16 (100%)

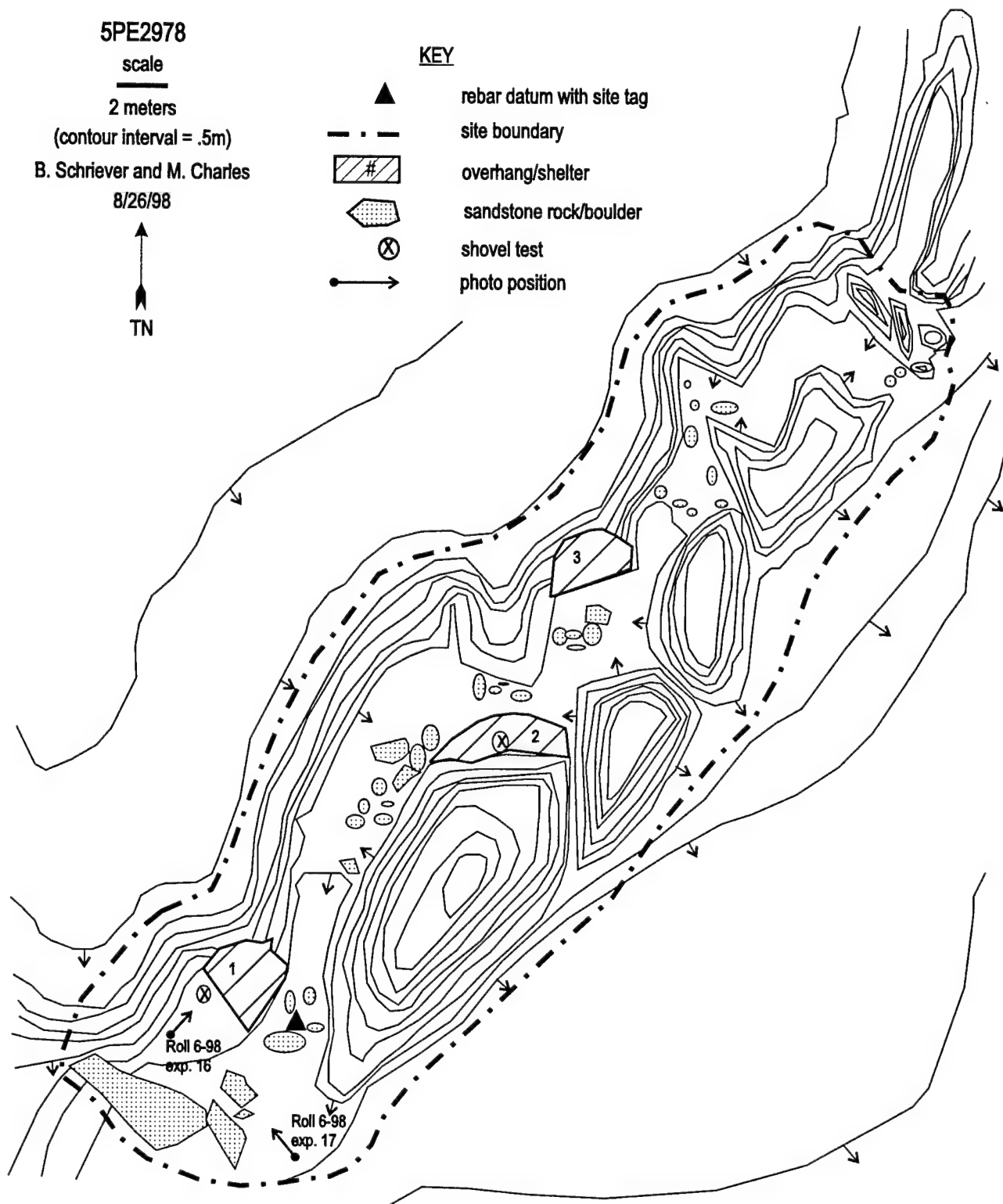


Figure III.96. Site Map, 5PE2978.

Management Recommendation: Sign and Avoid. Surface and subsurface evidence clearly indicates that the site is eligible for nomination to the NRHP. Erosion is not an immediate concern, and there is a minor potential for military impacts.

5PE2979

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6190 ft (1887 m) asl

Aspect: 270 ° Slope: 0

Site Dimensions: 8.5 m NE/SW x 3.5 m NW/SE

This site is a small flaked-lithic artifact scatter located on a small bench on the south side of a ridge (Figure III.97). The vegetation on the site consists of pinon, juniper, cholla, prickly pear cactus, and bunch grasses, with a wooded area to the north of the site. The soils are a gravelly gray silt. The soils are shallow (25 cm), and bedrock is exposed at the site. No erosional damage was observed.

The artifact assemblage consists of thirty-seven flakes (Table III.72). All artifacts were analyzed in the field. Local lithic raw material types were utilized. The number of large flakes and the high number of flakes with cortex suggest that core reduction was the dominant activity. The high number of complex flakes indicates that middle stages of core reduction as well as later stages were carried out at the site. The high percentage of flakes with cortex supports this assumption. However, the Sullivan and Rosen (1985) classification system suggests much more of an emphasis on core reduction than on tool manufacturing. No temporally diagnostic materials were found, and, therefore, the cultural affiliation and age are undetermined.

Statement of Significance: Exposed bedrock indicates shallow sediment accumulation and little potential for intact buried deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2980

Site Type: Prehistoric Open Site Lacking Features

Elevation: 6000 ft (1829 m) asl

Aspect: 180 ° Slope: 1 °

Site Dimensions: 47 m N/S x 30 m E/W

This site is a flaked-lithic artifact scatter situated in a small valley just east of the crest of Booth Mountain (Figure III.98). There is a drainage to the north (trending west/east to Turkey Creek) and a small terrace to the south. A burned rock feature (not impacted by blade work) is in the northeast corner of the site. The vegetation on and around the site includes pinon, juniper, mountain mahogany, saltbush, prickly pear cactus, cholla cactus, and bunch grasses. Three-quarters of the site area has been bladed. The soil is a fine tan sand with eroding and exposed sandstone. The sand has the limited depth of 5 cm or less. Very little deposition remains.

Feature 1 is a burned rock concentration made of sandstone. The dimensions are 1.2 m x 1.1 m.

The 103 flaked-lithic artifacts were analyzed in the field (Table III.73). Additionally, a silicified wood, corner-notched projectile point was located and collected. Based on the types of flakes, the projectile point and the feature, the inferred activities of the site are lithic reduction, hunting, and food preparation. Local raw material types were utilized. Orthoquartzite and chert account for over ninety percent of all analyzed flakes. Both debitage analyses used to interpret the flake assemblage indicate that core reduction or early stages of reduction were the primary activity.

The number of large flakes and the high number of simple flakes represent early stages of core reduction (Ahler and Smail 1999). The presence of a high number of complex flakes probably indicates that middle stages of reduction were also being conducted. Tool production was most likely conducted at the site based on the presence of small flakes, particularly those smaller than 1/4" (12.5%). No bifacial thinning flakes were observed, however. The flake assemblage was broken down by size grade to examine the variables of material type and flake type (Table III.74). Complex flakes were the most common flake type in Size Grade 1, and this supports the position that middle stages of core reduction were carried out at the site. Core-reduction activities at that site were

5PE2979
 scale
 1 meter
 (contour interval = .25m)

R. Marvin
 10/10/98

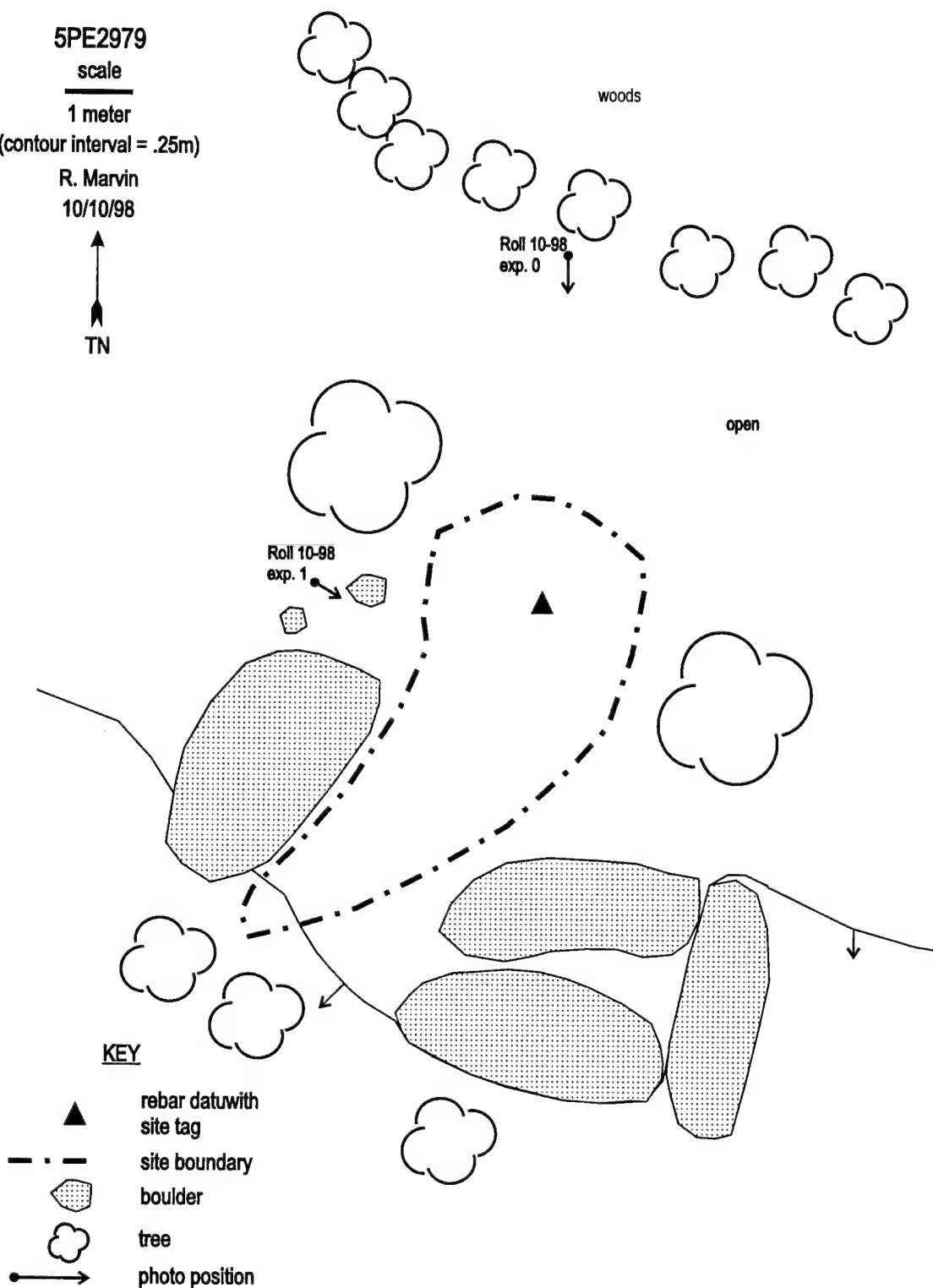


Figure III.97. Site Map, 5PE2979.

Table III.72. Flaked-lithic Debitage, 5PE2979.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"			25	4						29 (78.4%)
1/4"-1/2"			7	1						8 (21.6%)
<1/4"										
Total (%)			32 (86.5%)	5 (13.5%)						37 (100%)
Flake Type										
Shatter			4	1						5 (13.5%)
Simple			9							9 (24.3%)
Complex			19	4						23 (62.2%)
Bifacial Thinning										
Total (%)			32 (86.5%)	5 (13.5%)						37 (100%)
Cortex										
Present			25	3						28 (75.7%)
Absent			7	2						9 (24.3%)
Total (%)			32 (86.5%)	5 (13.5%)						37 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			19	2						21 (56.8%)
Broken			9	1						10 (27%)
Flake Fragment				1						1 (2.7%)
Debris			4	1						5 (13.5%)
Total (%)			32 (86.5%)	5 (13.5%)						37 (100%)

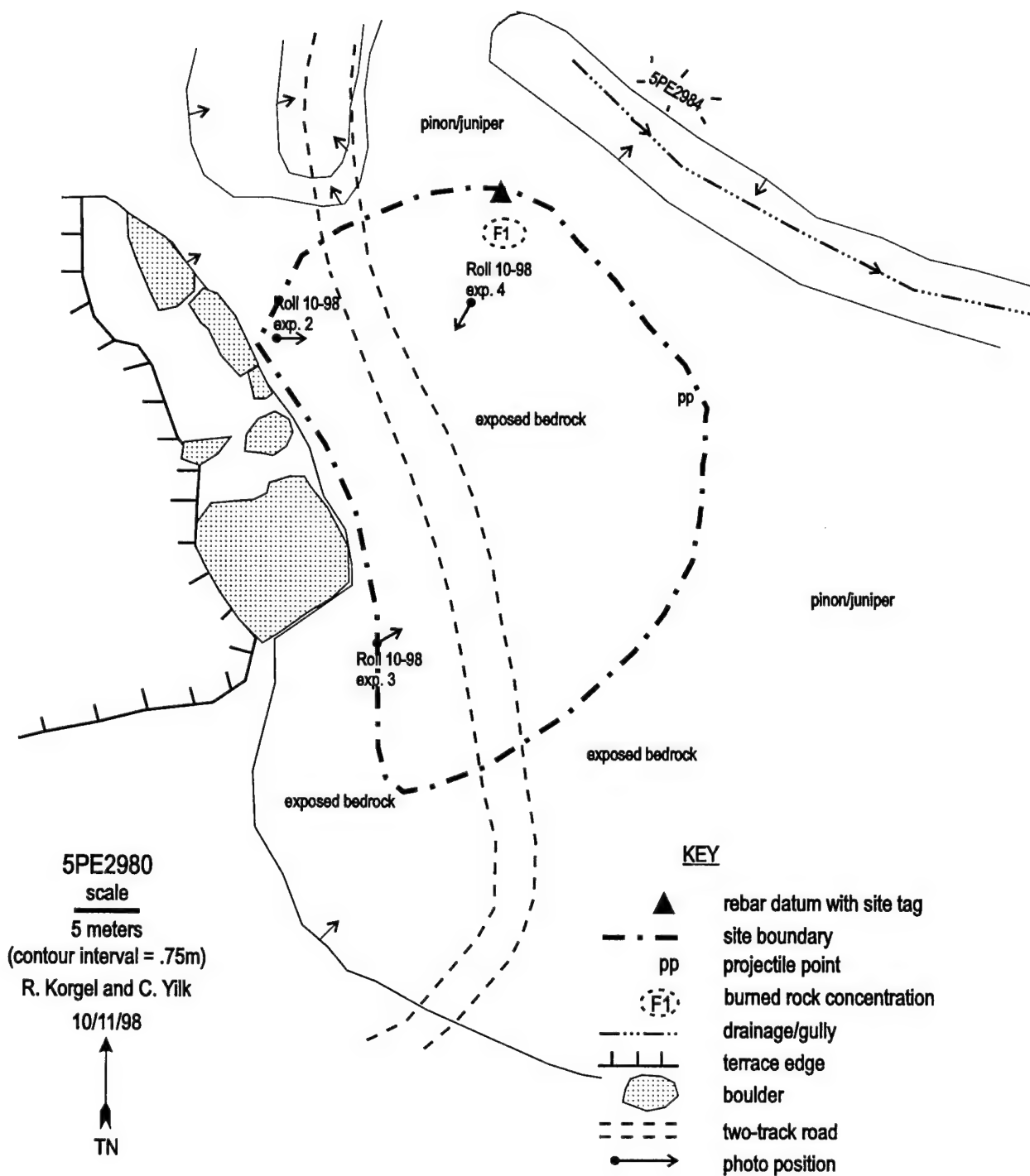


Figure III.98. Site Map, 5PE2980.

Table III.73. Flaked-lithic Debitage, 5PE2980.

Material Type										Total (%)
	Hornfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone		
Size										
>1/2"	1		33	18	2	1	2			57 (55.4%)
1/4"-1/2"	1		21	10	1					33 (32%)
<1/4"			8	4		1				13 (12.6%)
Total (%)	2 (1.9%)		62 (60.2%)	32 (31.1%)	3 (3%)	2 (1.9%)	2 (1.9%)			103 (100%)
Flake Type										
Shatter	1		11	3						15 (14.5%)
Simple			30	5		1				36 (35%)
Complex	1		21	24	3	1	2			52 (50.5%)
Bifacial Thinning										
Total (%)	2 (1.9%)		62 (60.2%)	32 (31.1%)	3 (3%)	2 (1.9%)	2 (1.9%)			103 (100%)
Cortex										
Present	2		51	20	2	2				77 (74.8%)
Absent			11	12	1		2			26 (25.2%)
Total (%)	2 (1.9%)		62 (60.2%)	32 (31.1%)	3 (3%)	2 (1.9%)	2 (1.9%)			103 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete	1		33	23	2	1	2			62 (60.2%)
Broken			7	4	1					12 (11.7%)
Flake Fragment			11	2		1				14 (13.6%)
Debris	1		11	3						15 (14.5%)
Total (%)	2 (1.9%)		62 (60.2%)	32 (31.1%)	3 (3%)	2 (1.9%)	2 (1.9%)			103 (100%)

Table III.74. Flaked-lithic Debitage by Size Grade, 5PE2980.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert		3 (16.7%)	15 (83.3%)		18 (31.6%)
Orthoquartzite	7 (21.1%)	10 (30.3%)	16 (48.5%)		33 (5.9%)
Chalcedony			2 (100%)		2 (3.5%)
Quartzite					
Quartz			2 (100%)		2 (3.5%)
Silicified Wood			1 (100%)		1 (1.8%)
Other			1 (100%)		1 (1.8%)
Total	7 (12.3%)	13 (22.85)	37 (64.9%)		57 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	3 (30%)	2 (20%)	5 (50%)		10 (30.3%)
Orthoquartzite	3 (14.3%)	14 (66.7%)	4 (19.1%)		21 (63.6%)
Chalcedony			1 (10.0%)		1 (3%)
Quartzite					
Quartz					
Silicified Wood					
Other	1 (100%)				1 (3%)
Total	7 (21.1%)	16 (48.5%)	10 (30.3%)		33 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert			4 (100%)		4 (30.8%)
Orthoquartzite	1 (12.5%)	6 (75%)	1 (12.5%)		8 (61.5%)
Chalcedony					
Quartzite					
Quartz					
Silicified Wood		1 (100%)			1 (7.7%)
Other					
Total	1 (7.7%)	7 (53.9%)	5 (38.5%)		13 (100%)

not simply the preparation of cores, but the further reduction of the material for later use, or in the preparation for tool production.

The higher percentage of complete flakes (62%) and debris (14.5%) suggests that core reduction was the primary activity conducted at the site (Sullivan and Rosen 1985). Complete flakes are more indicative of initial stages of core reduction, whereas debris can represent the remains of more intensive core reduction; however, based on the high percentage of complete flakes, initial stages of core reduction were more dominant based on the high percentage of complete flakes. The low percentage of broken flakes and flake fragments would indicate that tool manufacturing was not a priority at the site. A small expanded stem projectile point (Figure 7.4f) similar to Category P74 (Lintz and Anderson 1989:206-207) places occupation of the site in the Early Ceramic period (A.D. 600-950).

Statement of Significance: The site has been severely impacted through road maintenance, and there is little potential for the site to yield significant intact buried deposits. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2981

Site Type: Historic Homesteading/Agriculture-Related Non-Habitation Site

Elevation: 6280-6440 ft (1914-1963 m) asl

Aspect: 240° Slope: 3-15°

Site Dimensions: 520' x 6.5'

This site consists of a historic fence line on the west side of Booth Mountain (Figure III.99). The fence begins at the escarpment just below the very top of a flat area on top of Booth Mountain, and continues west across a boulder-strewn bench. The fence then goes down a boulder-strewn slope and turns north, crossing a narrow bench, before ending approximately 80 m from the escarpment above a steep drainage. The fence consists mainly of juniper limbs and barbed-wire, but large boulders are also incorporated into the fence. Smaller cobbles are used in several places near the boulders to weigh down the barbed-wire. The fence was created by placing juniper limbs between, and up against living trees. Barbed-wire was then strung along the top of the limbs. Vegetation includes juniper, pinon, cholla, grasses, prickly pear cactus, buckwheat, and mountain mahogany. The sediments are a gravelly, brown silt loam that is approximately 20 cm deep. The fence has been subject to general deterioration over time.

The fence material consists of numerous juniper limbs and branches, whole trees, and a few pinon branches. The wood was used in conjunction with one to two strands of double barbed-wire. No artifacts other than barbed-wire were directly associated with the feature.

The original use of the fence is assumed to be related to livestock grazing. The site is a historic fence that was probably built prior to WWII, based on the state of deterioration of the wood. The ethnic affiliation of the builders is undetermined. The earliest patent date for the surrounding area is November 21, 1903. The property was granted to the State of Colorado as a School Selection (Zier et al. 1987: Appendix E). The fence is similar to other historic fences (5PE2982 and 5PE1796) in the same general area.

Statement of Significance: The site is not recommended as being eligible for nomination to the NRHP, because of the limited amount of information available. The documentation of this single historic feature has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2982

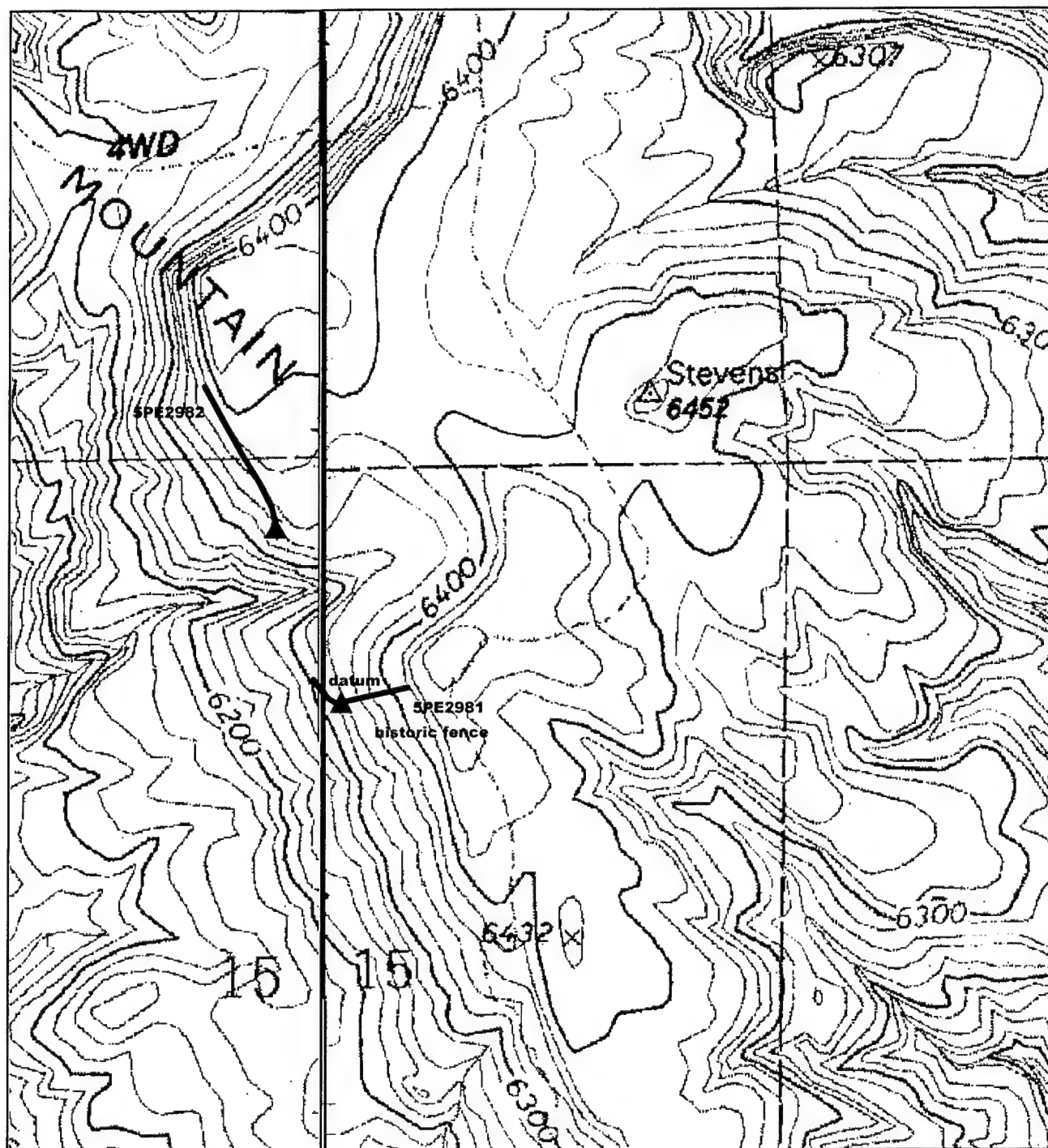
Site Type: Historic Homesteading/Agriculture-Related Non-Habitation Site

Elevation: 6320-6380 ft (1926-1945m) asl

Aspect: 240° Slope: 5-20°

Site Dimensions: 1027' x 6.5'

This site consists of a historic juniper fence (Figure III.100). The fence fills a gap along a portion of the western edge of Booth Mountain where the escarpment is not present. The south end of the fence begins where the escarpment ends. The fence follows parallel and just below the top edge of Booth Mountain. The escarpment changes to a rocky more gradual slope to the north. At



Pierce Gulch 7.5' Quadrangle

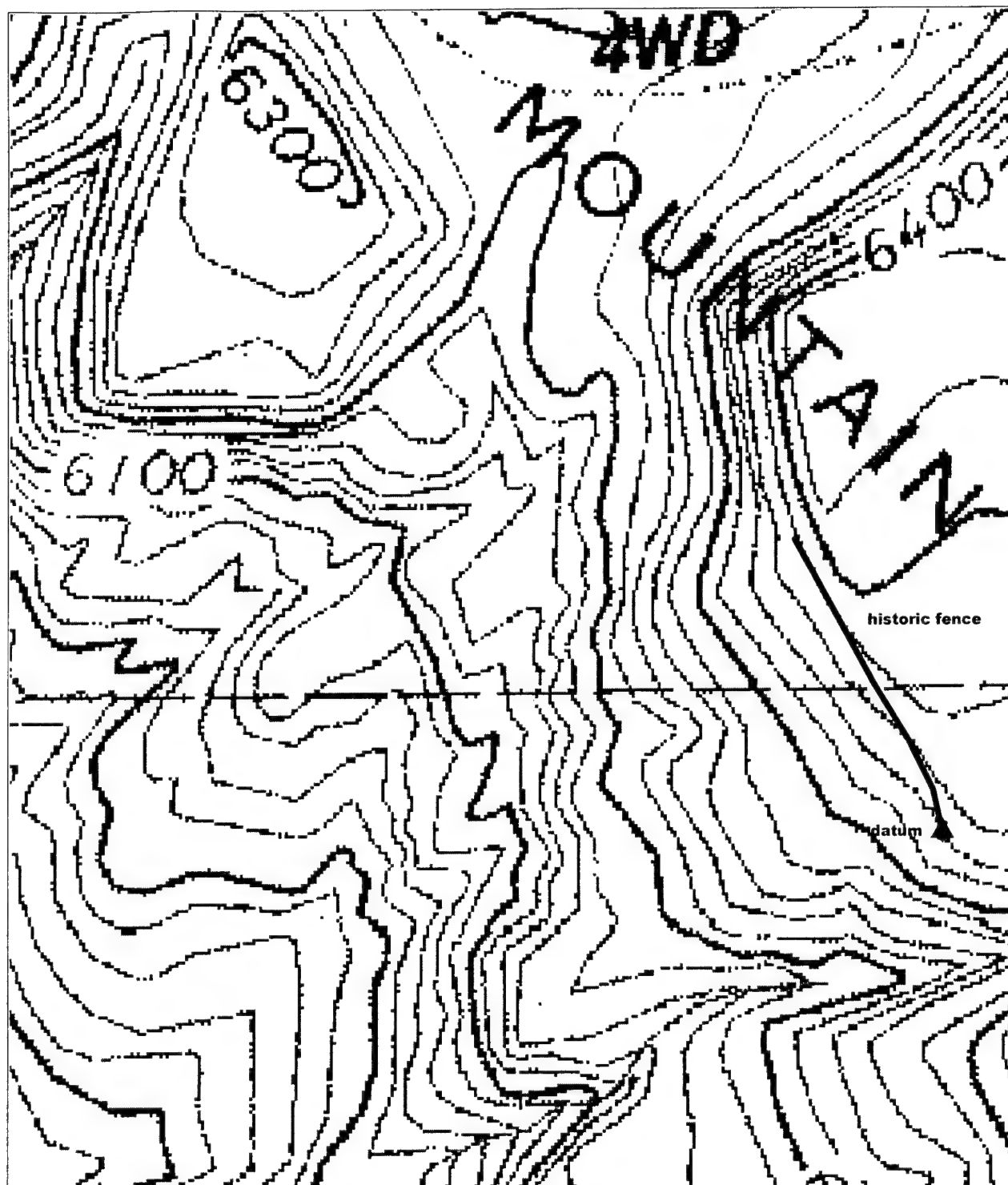
Stone City 7.5' Quadrangle

5PE2981



70 0 70 140 Meters

Figure III.99. Site Map, 5PE2981.



Pierce Gulch 7.5 Quadrangle

5PE2982



30 0 30 60 Meters



Figure III.100. Site Map, 5PE2982.

the north end of the fence, the escarpment appears again. The sediments are a gravelly silty loam between 10-30cm deep. The vegetation includes juniper, pinon, grasses, prickly pear cactus, mountain mahogany, and cholla.

Evidence of axe and saw cut limbs are present. The fence was created by placing juniper limbs between and leaning up against living trees. The limbs are piled as high as 2.5 to 3 feet above the ground surface, but generally, they are closer to the ground. No barbed wire was noted as with other nearby fences (5PE2981 and 5PE1796) although the basic construction appears the same.

The juniper along the fence line is deteriorating. No other historic artifacts were associated with the fence. The fence is assumed to be related to livestock grazing and probably dates prior to WWII, based on the deterioration of wood in the fence. The ethnic affiliation of the builders is undetermined. The site is in two adjoining sections. The earliest patent date for part of the site in section 10 was on May 3, 1920 by William Manderson (Zier et al. 1987: Appendix E). The earliest patent date for part of the site in section 15 was on May 12, 1922 by Anton Masha.

Statement of Significance: The site is recommended as being not eligible for the NHRP, because of the limited amount of information available. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work is recommended.

5PE2983

Site Type: Historic Homesteading/Agriculture-Related Non-Habitation Site

Elevation: 5860-5930 ft (1786-1807 m) asl

Aspect: 150° Slope: 20-30°

Site Dimensions: 240' x 6.5'

This site consists of a historic juniper fence (Figure III.101). The fence begins at the canyon rim on the east edge of flat tableland and continues down slope into the canyon to the drainage. From the rim, the fence goes east and then turns more to the southeast near the east end. Stumps are visible near the fence and an area has been cleared along the north side of the fence for a livestock trail (Figure III.102). Sandstone moved from the trail is piled in the fence in those areas. Large boulders are part of the fence in the lower half of the site. The juniper in the fence ranges from limbs to whole trees. Evidence of axe- and saw-cuts are present. The

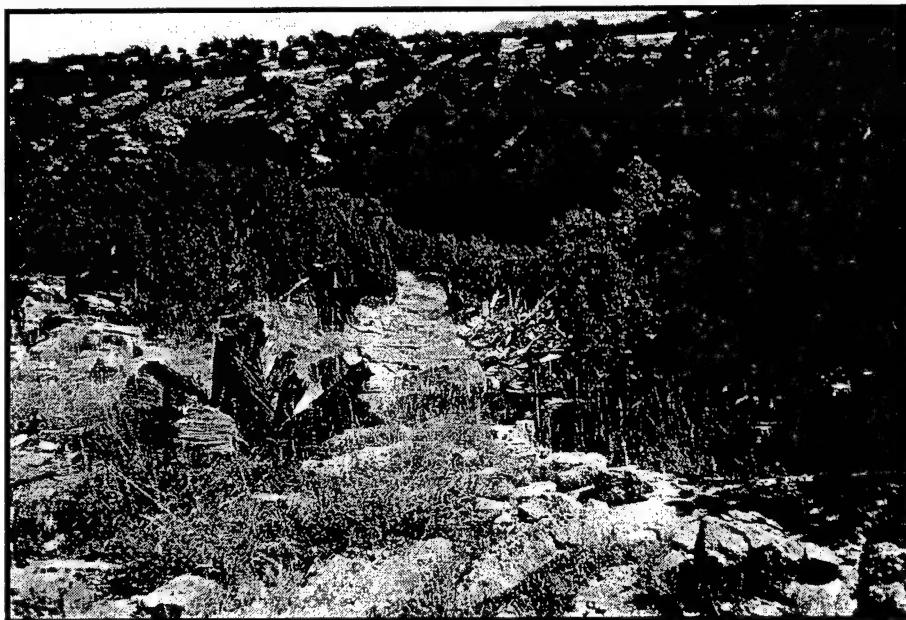
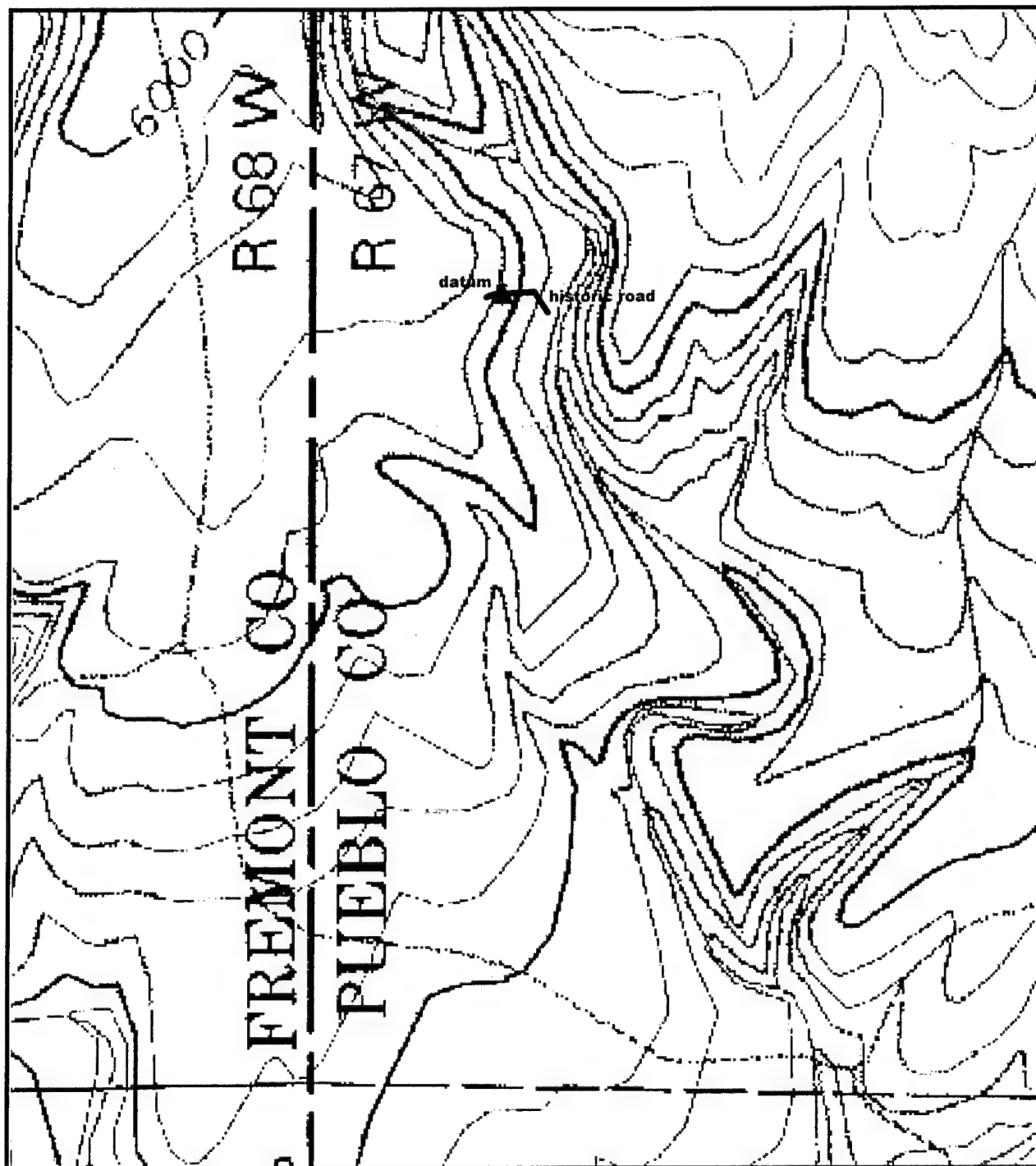


Figure III.102. Photo of historic fence, 5PE2983. View is to the east. Roll 10, #20.



5PE2983

Pierce Gulch 7.5 Quadrangle



60 0 60 120 Meters



Figure III.101. Site Map, 5PE2983.

fence was created by placing juniper limbs between and leaning up against living trees. No barbed-wire was associated with the fence. From the canyon rim a three-strand barbed wire and juniper post fence extends westward to a two-track road, but was not recorded as part of the site as it seems to be a recent (not deteriorated) addition to the fence line. The sediments are a gravelly brown sandy silt that is only about 15 cm deep. The vegetation includes juniper, pinon, grasses, snakeweed, prickly pear cactus, mountain mahogany, and mullein. The juniper along the fence line is deteriorating. No other historic artifacts were found associated with the fence. The fence is assumed to be related to livestock grazing and probably dates prior to WWII, based on the deterioration of wood in the fence, which appears aged well beyond current use. The ethnic affiliation of the builders is undetermined. The earliest patent dates for the surrounding area are State of Colorado School Selections that date to January 8, 1902 and May 12, 1908 (Zier et al. 1987: Appendix E).

Statement of Significance: The site is recommended as being not eligible for recommendation to the NRHP, because of the limited amount of information available. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE2984

Site Type: Prehistoric Sheltered Site

Elevation: 5980 ft (1823 m) asl

Aspect: 180 ° Slope: 1 °

Site Dimensions: 35 m NW/SE x 4 m N/S

This rock shelter is on the north side and near the head of a drainage just east the crest of Booth Mountain (Figure III.103). The drainage empties into Turkey Creek and 5PE2980 is 30 m to the south. The vegetation on the site includes cholla, pinon, juniper, and bunch grass. The surrounding vegetation is a pinon and juniper woodland. The soil is light gray silt with roof fall and is more than 25 cm in depth. The rock shelter is subject to flooding, and the sandstone is undergoing weathering, but from the surface investigation it is not readily apparent to what extent the site has been affected by erosion.

The rock shelter is 35 m long and between 1-1.5 m high (Figure III.104). Seven flaked-lithic artifacts were recorded, and they include two chert flakes and five orthoquartzite flakes (Table III.75). The lithic raw materials are locally available. The small number of artifacts limits the inferences that can be drawn from the assemblage. The cultural affiliation and age are undetermined because of a lack of temporally diagnostic artifacts.

Statement of Significance: The site is potentially eligible for nomination to the NRHP because it has at least 25 cm of sediment accumulation that could contain buried artifacts and features in good context. The site is likely to yield information important to prehistoric research based on the research themes of chronology and cultural relationships, settlement patterns, prehistoric economies and possibly on paleoenvironments and geomorphology as outlined in the CRMP (Zier et al. 1997).

Management Recommendation: Avoid and Test. Subsurface excavations are necessary to determine if intact buried deposits are present and that the eligibility recommendation is justified.

5PE2985

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5780 ft (1762 m) asl

Aspect: 120 ° Slope: 2 °

Site Dimensions: 41 m N/S x 26 m E/W

This site is a flaked-lithic artifact scatter in an open meadow above and east of Salt Canyon (Figure III.105). It is at the west edge of an intermittent drainage near the east edge of open tableland. The vegetation on the site includes grasses, snakeweed, prickly pear cactus, and cholla cactus. Pinon and juniper woodland is present on the slope to the east. The soil is a brown sandy silt with a depth of less than 20 cm. Evidence of military vehicular traffic was observed near the site, but it has not adversely affected the site.

The total number of artifacts recorded was forty-three. These include three tools and forty flakes. Local lithic raw material types were

5PE2984

scale
2 meters

(no contours)

R. Marvin

10/11/98

← TN

KEY

- ▲ rebar datum with site tag
- - - site boundary
- back of shelter
- - - drip line
- ☁ juniper tree
- ◼ boulder
- ↔ cross-section

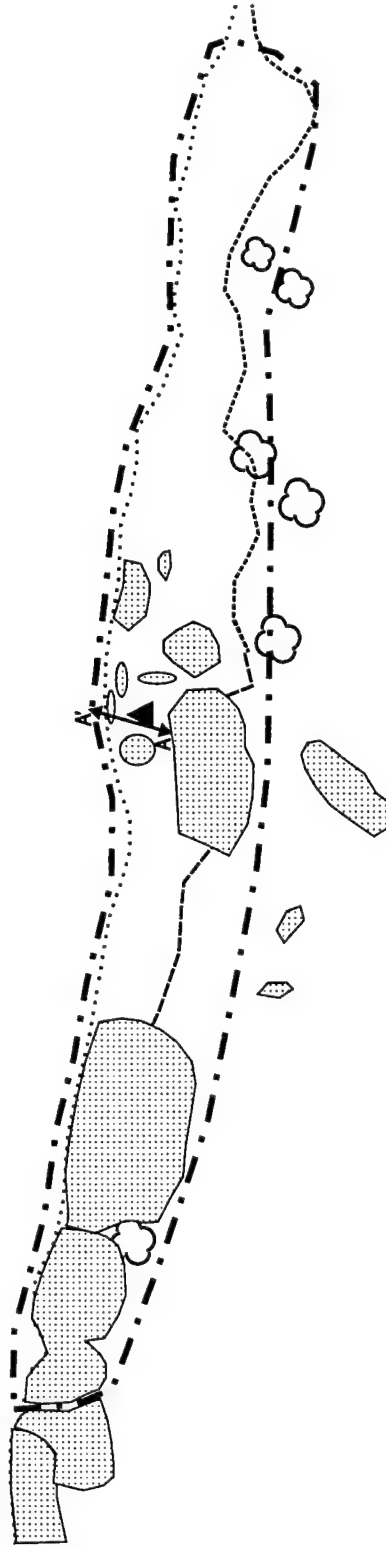


Figure III.103. Site Map, 5PE2984.

5PE2984

Cross-section Map

scale

25 cm

R. Korgel and C. Yilk

10/11/98

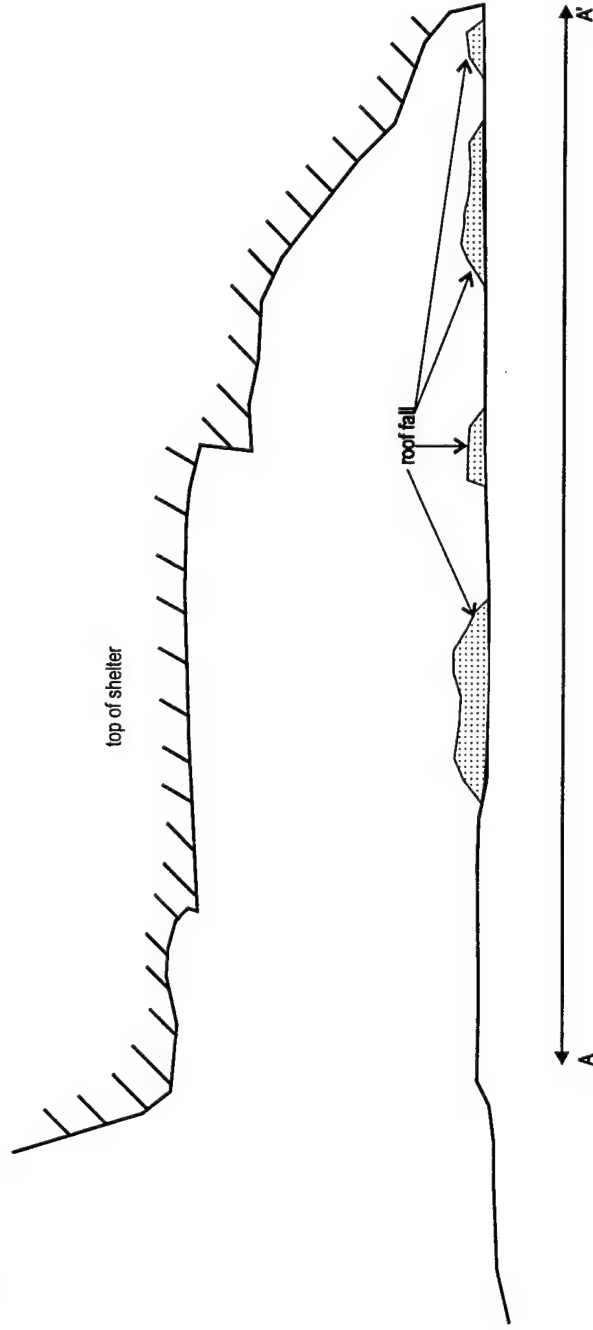


Figure III.104. Cross-section Map, 5PE2984.

III.229

Table III.75. Flaked-lithic Debitage, 5PE2984.

Material Type										Total (%)
	Hornfels and Basals	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Sillstone		
Size										
>1/2"			5	2						7 (100%)
1/4"-1/2"										
<1/4"										
Total (%)			5 (71.4%)	2 (28.4%)						7 (100%)
Flake Type										
Shatter										
Simple			1							1 (14.3%)
Complex			4	1						5 (71.4%)
Bifacial Thinning				1						1 (14.3%)
Total (%)			5 (71.4%)	2 (28.4%)						7 (100%)
Cortex										
Present			5	1						6 (85.7%)
Absent				1						1 (14.3%)
Total (%)			5 (71.4%)	2 (28.4%)						7 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete			5	2						7 (100%)
Broken										
Flake Fragment										
Debris										
Total (%)			5 (71.4%)	2 (28.4%)						7 (100%)

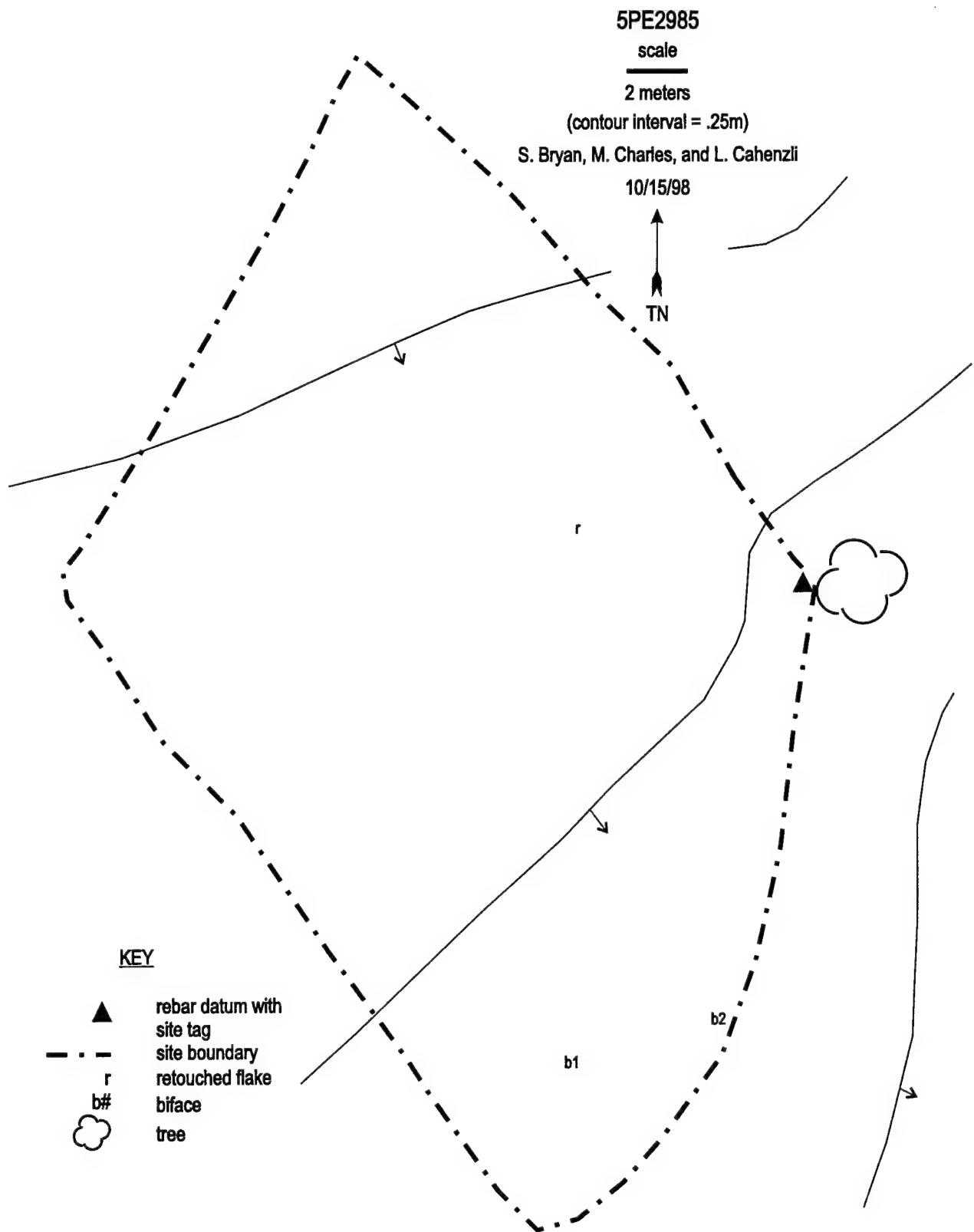


Figure III.105. Site Map, 5PE2985.

utilized. One retouched chert flake, one chalcedony patterned biface, and a chert biface fragment were collected (Table III.76). The types and the size of flakes suggest tool manufacture, while the tools may indicate food or hide processing. The relatively high percentage of smaller flakes and complex flakes suggest that tool production had a greater emphasis than core reduction (Ahler and Smail 1999). According to the Sullivan and Rosen (1985) classification system, the emphasis was on tool manufacturing, as opposed to core reduction. The cultural affiliation and age are undetermined due to the lack of temporally diagnostic materials at the site.

Statement of Significance: The site is not recommended as eligible for nomination to the NRHP, because of the small number of artifacts and the low potential for buried materials. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

Previously Recorded Sites

Two sites that had been previously recorded were reevaluated over the course of the project. The two sites are discussed below.

5PE344

Site Type: Historical Human Grave Site and Agriculture-Related Non-Habitation Site

Elevation: 5360 ft (1634 m)

Aspect: 120° Slope: 2°

Site Dimensions: 25 m N/S x 27 m E/W

This site was recorded in 1979 by Grand River Consultants (Alexander et al. 1982). The site consists of three historic features and a light scatter of historic artifacts. The site is located in an open grassy area on a gentle southeasterly slope that leads onto the alluvial terrace above Turkey Creek (Figure III.106). The old Colorado and Kansas Railroad bed is located just to the west. The site is next to the current southern boundary of Fort Carson, with boundary fences immediately adjacent to the south and east sides of the site. A firebreak road follows the Fort Carson boundary fence, and the site is between the road and the fence. Various short prairie grasses dominate the vegetation on the site. Other vegetation includes cholla, prickly pear cactus, grama grass, buffalo grass, and pioneer species. The sediments consist of a light brown gravelly sandy loam with an estimated depth of 30 cm. The site has moderate disturbance, but it is in fairly stable condition.

Three features are identified: a single marked gravestone, an artifact concentration, and a scatter of sandstone blocks that may represent the remnants of a structural foundation.

Feature 1: The gravestone is made of finely cut sandstone, and may have been a pedestal or part of a pedestal. It is very crudely lettered with the words: "Willber Rowe Died", line 1-"WillB", line2-"ER.ROWE", line3-"DiEd". The stone measures 9" in length, 9" in width, and 8.3" in height.

Feature 2: Feature 2 is a 10' x 5' concentration of solarized glass, most of which is from one bottle. This concentration is directly adjacent to the east side of the grave stone, and contains approximately ten to fifteen fragments.

Feature 3: A 6' x 7.5' oblong mound of sandstone blocks defines Feature 3. The origin and purpose is undetermined, although it may be the remains of a structural foundation, a well, or another grave. Scattered and weathered, small wooden planks are located to the south of this feature. Bits of coal, charcoal, and two bricks were found in the vicinity as well.

Approximately ninety artifacts and numerous pieces of construction material were observed. The artifacts are glass, ceramic and metal. Twenty pieces of solarized bottle glass and four pieces of milk glass from a canning jar liner represent the glass artifacts. The single ceramic is a piece of whiteware. Metal artifacts are the most numerous and the most diverse type and include nails, cans, and miscellaneous pieces of metal. The nails are: cut (1), wire (10), and roofing nails (20). Cans include crimped seam cans (3), tobacco tins (2), and several can fragments. Miscellaneous metal artifacts include a twelve-gauge shotgun shell, a barrel stave, a kerosene lantern burner, a metal barrel, and pieces of sheet metal. Construction materials consist of two bricks, milled lumber, and sandstone blocks. Numerous pieces of coal and one piece of clinker were also observed.

Table III.76. Flaked-lithic Debitage, 5PE2985.

Material Type										Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Argillite		
Size										
>1/2"		1	9	8			1	1		20 (50%)
1/4"-1/2"		1		12	1					14 (35%)
<1/4"			1	5						6 (15%)
Total (%)		2 (5%)	10 (25%)	25 (62.5%)	1 (2.5%)		1 (2.5%)	1 (2.5%)		40 (100%)
Flake Type										
Shatter			1	2						3 (7.5%)
Simple		2	4	9	1					16 (40%)
Complex			5	14			1	1		21 (52.5%)
Bifacial Thinning										
Total (%)		2 (5%)	10 (25%)	25 (62.5%)	1 (2.5%)		1 (2.5%)	1 (2.5%)		40 (100%)
Cortex										
Present		2	8	9			1	1		21 (52.5%)
Absent			2	16	1					19 (47.5%)
Total (%)		2 (5%)	10 (25%)	25 (62.5%)	1 (2.5%)		1 (2.5%)	1 (2.5%)		40 (100%)
Flake Type (Sullivan and Rosen 1985)										
Complete		1	6	15	1		1			24 (60%)
Broken			2	3				1		6 (15%)
Flake Fragment		1	1	5						7 (17.5%)
Debris			1	2						3 (7.5%)
Total (%)		2 (5%)	10 (25%)	25 (62.5%)	1 (2.5%)		1 (2.5%)	1 (2.5%)		40 (100%)

III.234

The site has a historic grave marker and may also represent a historic habitation. If the site had a standing structure it has either been moved or completely razed. The number and type of artifacts suggest a very limited occupation unless other historic trash was removed. Discounting the majority of metal artifacts (i.e. nails, sheet metal), except for the cans, there is minimal evidence of household or consumption related artifacts. The grave marker was not inscribed with a date. The solarized glass dates the site to pre-WWI, but these glass artifacts represent the remains of only one bottle. The land was patented in 1891 as a State of Colorado School selection. The site is believed to date to the early 1900s.

Statement of Significance: The site is not recommended as being eligible for nomination to the NRHP. The site has deteriorated, and evidence for significant buried deposits is minimal. On its own, a historic human grave is not normally considered a significant archeological resource. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

5PE625

Site Type: Prehistoric Open Site Lacking Features

Elevation: 5740 ft (1750 m) asl

Aspect: 160° Slope: 2°

Site Dimensions: 95 m N/S x 25 m E/W

This large prehistoric site was originally recorded by Metcalf-Zier Associates in 1983 (Zier et al. 1987). It is located along the east edge of a broad grassy bench overlooking a larger intermittent tributary of Red Creek (Figure III.107). The drainage is lined with trees while the site is in an open grassy area. Open prairie is visible to the south. Vegetation includes various grasses, prickly pear cactus, cholla cactus, sunflowers, and juniper. The surface is covered with small sandstone gravels. The sediments are shallow (25 cm) and consist of a gravelly brown silt loam. A trowel probe indicates about 5 cm of loose silt before encountering a very compact silt loam. A heavily eroded two-track road bisects the site. Military vehicular traffic has traveled off-road within the site has disturbed its surface.

The size of site was rerecorded at double the size originally recorded. Four groundstone fragments and a possible hearth feature, noted when the site was originally recorded, were not relocated. The site appears limited to a surface scatter. A total of 116 artifacts was located at the site during the revisit. Observed artifacts include three chert biface fragments (two were refitted), which were collected, and one hundred and thirteen flakes (Table III.77) made of various materials, all of which are locally available. Chert accounts for over eighty percent of all material types represented.

Both debitage analyses used to interpret the flake assemblage indicate that tool manufacturing was the primary activity at the site with some core reduction. The high percentage of small flakes, the number of complex flakes, and the high percentage of flakes without cortex all indicate tool production was the preferred activity at the site (Ahler and Smail 1999). Core reduction of chert also occurred, based on the number of large, simple chert flakes. Chert cores were probably initially prepared prior to being brought to the site with middle to latter stages of reduction occurring at the site. The flake assemblage was also broken down by size grade to examine the variables of material type and flake type (Table III.78). Complex flakes are more prevalent in size Size Grade 1 with nearly equal amounts of simple and complex flakes present in size Size Grade 2. The higher percentage of large complex flakes supports the supposition that latter stages of reduction, including tool production, took place at the site.

Using the Sullivan and Rosen (1985) classification system suggests that tool manufacturing was the primary activity at the site. This interpretation is based on the high percentage of broken flakes and flake fragments, which are interpreted as the result of tool production. The overall flake assemblage indicates that tool manufacturing was more prevalent than core reduction activities, but that both occurred at this location. No temporally diagnostic materials were found at this site during either recording; therefore, the cultural affiliation and age remain undetermined.

Statement of Significance: This previously recorded site has limited research potential based on the lack of significant soil deposition and the amount of military vehicular disturbance. Site documentation has exhausted its research potential.

Management Recommendation: No further archeological work.

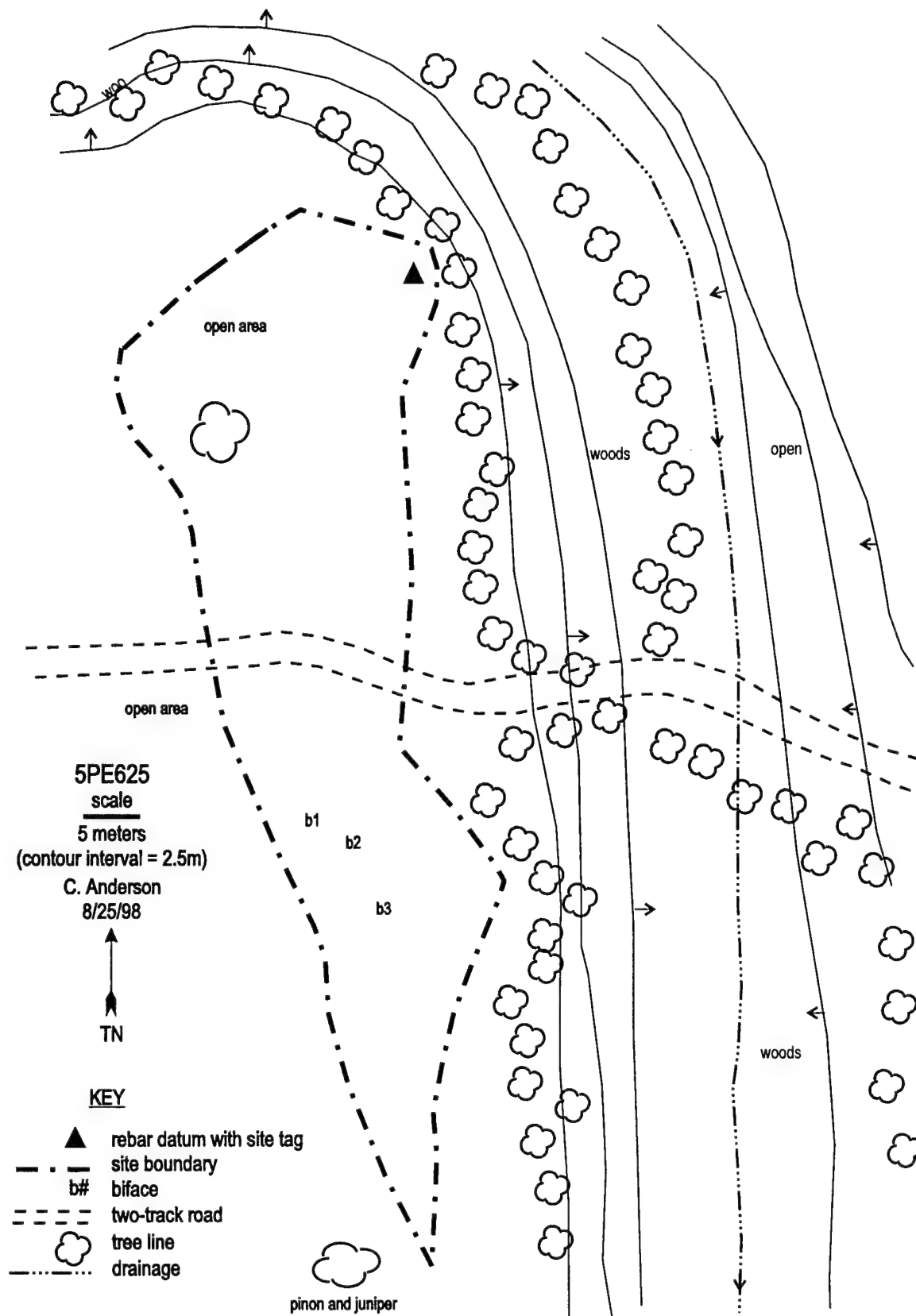


Figure III.107. Site Map, 5PE625

Table III.77. Flaked-lithic Debitage, 5PE625.

Material Type									Total (%)
	Homfels and Basalt	Quartzite	Orthoquartzite	Chert	Chalcedony	Silicified Wood	Quartz	Siltstone	
Size									
>1/2"		1	3	31	2		2		39 (34.5%)
1/4"-1/2"		1	3	47	2	1	3		57 (50.5%)
<1/4"				17					17 (15%)
Total (%)		2 (1.8%)	6 (5.3%)	95 (84%)	4 (3.5%)	1 (9%)	5 (4.4%)		113 (100%)
Flake Type									
Shatter				10	1				11 (9.7%)
Simple		1	2	37	1		4		45 (39.8%)
Complex		1	4	48	2	1	1		57 (50.5%)
Bifacial Thinning									
Total (%)		2 (1.8%)	6 (5.3%)	95 (84%)	4 (3.5%)	1 (9%)	5 (4.4%)		113 (100%)
Cortex									
Present			2	30	2		2		36 (31.9%)
Absent		2	4	65	2	1	3		77 (68.1%)
Total (%)		2 (1.8%)	6 (5.3%)	95 (84%)	4 (3.5%)	1 (9%)	5 (4.4%)		113 (100%)
Flake Type (Sullivan and Rosen 1985)									
Complete			1	27	1	1			30 (26.6%)
Broken		1	4	33	2		2		42 (37.2%)
Flake Fragment		1	1	25			3		30 (26.5%)
Debris				10	1				11 (9.7%)
Total (%)		2 (1.8%)	6 (5.3%)	95 (84%)	4 (3.5%)	1 (9%)	5 (4.4%)		113 (100%)

Table III.78. Flaked-lithic Debitage by Size Grade, 5PE625.

GRADE 1					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	8 (25.8%)	3 (9.7%)	20 (64.5%)		31 (79.5%)
Orthoquartzite		1 (33.3%)	2 (66.7%)		3 (7.7%)
Chalcedony	1 (50%)		1 (50%)		2 (5.1%)
Quartzite		1 (100%)			1 (2.6%)
Quartz		1 (50%)	1 (50%)		2 (5.17%)
Silicified Wood					
Other					
Total	9 (23.1%)	6 (15.4%)	24 (61.5%)		39 (100%)
GRADE 2					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert	2 (2.3%)	23 (48.9%)	22 (46.8%)		47 (82.45%)
Orthoquartzite		1 (33.3%)	2 (66.7%)		3 (5.26%)
Chalcedony		1 (50%)	1 (50%)		1 (3.5%)
Quartzite			1 (100%)		1 (1.75%)
Quartz		3 (100%)			3 (5.26%)
Silicified Wood			1 (100%)		1 (1.7%)
Other					
Total	2 (3.5%)	28 (49.1%)	27 (47.4%)		57 (100%)
GRADE 3					
Material	Shatter	Simple	Complex	Bifacial Thinning	Total
Chert		11 (64.7%)	6 (32.2%)		17 (100%)
Orthoquartzite					
Chalcedony					
Quartzite					
Quartz					
Silicified Wood					
Other		11 (64.7%)	6 (32.2%)		17 (100%)
Total					

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Appendix IV
Radiocarbon Dates

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: estimated C13/C12=-25; lab mult.=1)

Laboratory Number: Beta-129180

Conventional radiocarbon age*: 1940 ± 70 BP

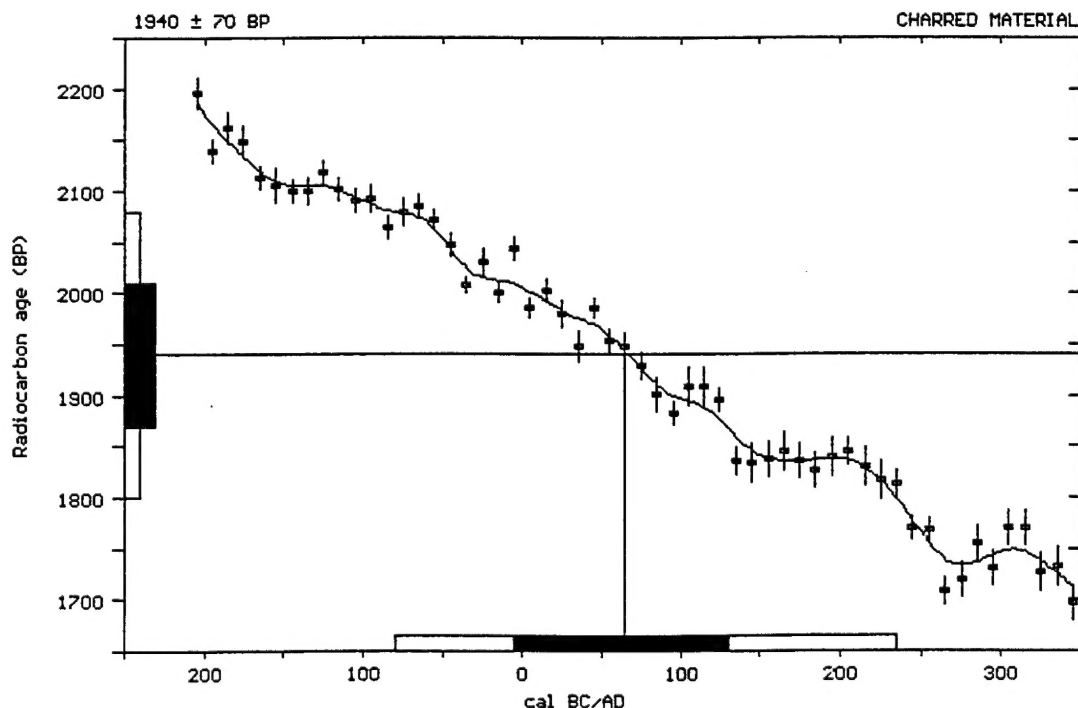
Calibrated results: cal BC 80 to cal AD 235 (Cal BP 2030 to 1715)
(2 sigma, 95% probability)

* C13/C12 ratio estimated

Intercept data:

Intercept of radiocarbon age
with calibration curve: cal AD 65 (Cal BP 1885)

1 sigma calibrated results: cal BC 5 to cal AD 130 (Cal BP 1955 to 1820)
(68% probability)



References:

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, *Radiocarbon* 40(3), pxi-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et. al., 1998, *Radiocarbon* 40(3), p1041-1083

Mathematics

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CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: estimated C13/C12=-25:lab mult.=1)

Laboratory Number: Beta-129181

Conventional radiocarbon age*: 1150 ± 80 BP

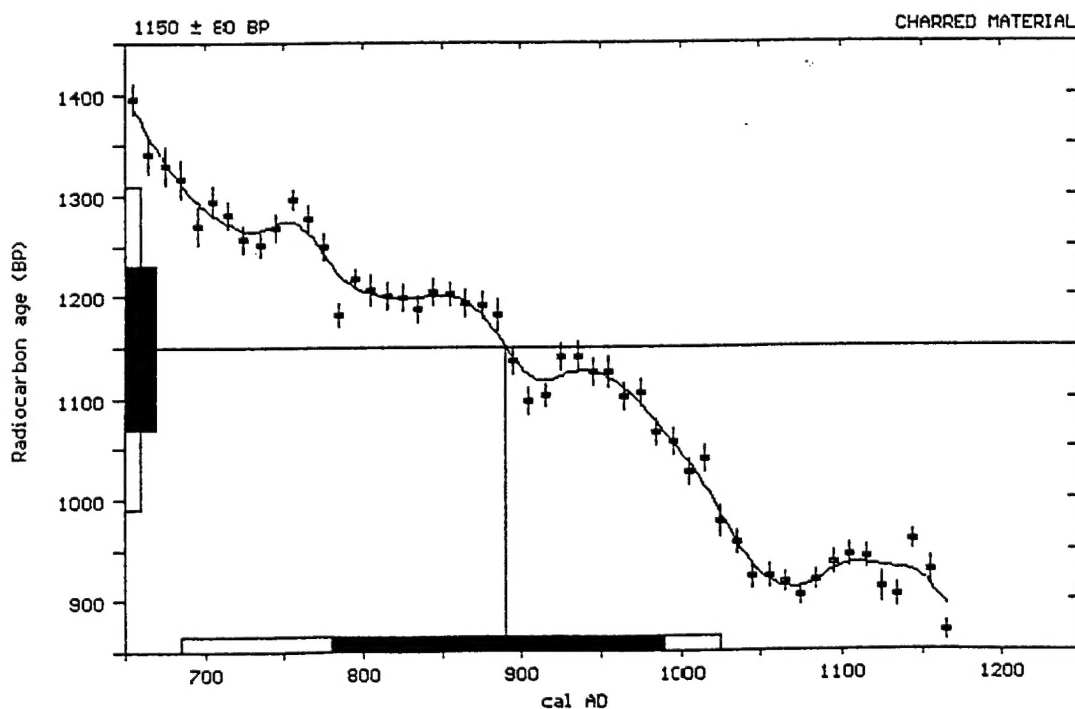
Calibrated results: cal AD 685 to 1025 (Cal BP 1265 to 925)
(2 sigma, 95% probability)

* C13/C12 ratio estimated

Intercept data:

Intercept of radiocarbon age
with calibration curve: cal AD 890 (Cal BP 1060)

1 sigma calibrated results: cal AD 780 to 990 (Cal BP 1170 to 960)
(68% probability)



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